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COUNTY AGENT VO-AG TEACHER

THE LEADING MAGAZINE FOR AGRICULTURAL LEADERS



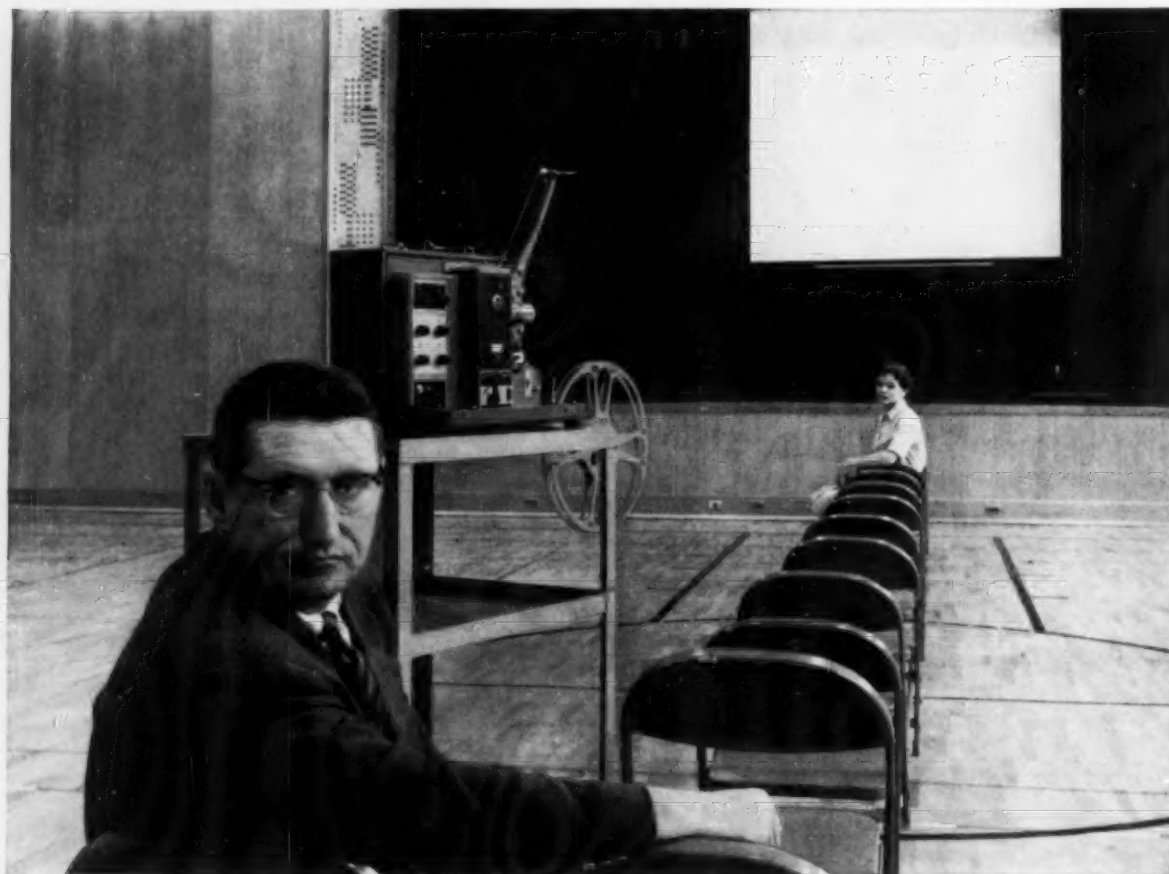
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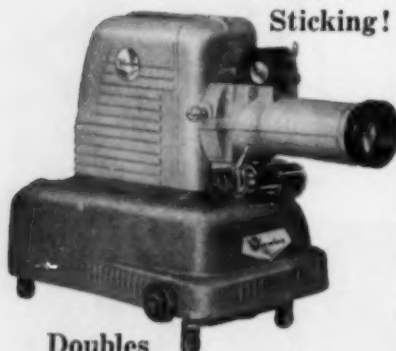


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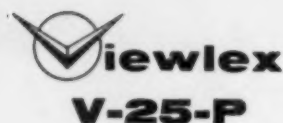
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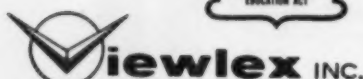


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COUNTY AGENT VO-AG TEACHER

JUNE 1961

Vol. 17 No. 6

THE LEADING MAGAZINE FOR AGRICULTURAL LEADERS

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AGRICULTURE BOOKS

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New
Kind
of



poultry contest

By JOHN L. SKINNER

THE old idea of placing one bird over another was not wrong as long as the birds were genetically different. The young people could return home from contests and apply the training that they had been given to the culling of their own flocks and those of their parents.

But progress made by modern day poultry breeders has eliminated much of the genetic variability that formerly existed in the laying flock. Today all of the birds from most of the recognized laying strains are genetically very similar and the differences in performance are largely the result of the man-made environment in which the birds live.

How best to incorporate this change or progress into a judging contest for young people was the problem facing the University of Nebraska poultry department. Round table discussions between vocational agriculture administrative personnel and poultry department staff members brought the impact of these changes out in the open and evolved a contest whereby the youngsters were asked to score the *adequacy of management* rather than individual bird differences.

Is 15 per cent a satisfactory protein level for a starting ration? Do birds in the laying house require 33 cubic feet of air per minute per bird? Are roosts necessary for day-old baby chicks? These and many others were the problems confronting the 1961 Nebraska FFA poultry judges.

Could they look at baby chicks and the floor plan of a brooder house and tell whether the feeders and waterers were adequate, whether the level of feed was too high, too low, or about right?

Could they observe the floor plan of a laying house and score the number of nests, the location of lights and the presence or absence of a good chore route?

These and many more questions—ranging from the interior quality of broken out eggs to the identification of feed ingredients—were scored on I.B.M. cards in terms of comparative adequacy.

Such phrases as deficient, optimum, excessive, not required, harmful or improper arrangement covered the equipment phases of the contest.

In the nutrition section, the contestants were required to evaluate the adequacy of different rations as well as to identify visually the ingredients making up rations.

Every staff member of the department of poultry husbandry at the University of Nebraska became involved in the six sections of this contest. Each was assigned a particular section and allowed to use the utmost of his own imagination and ingenuity in presenting a practical, realistic situation to the some 230 boys entered in the contest.

Many teaching aids — including Viewgraph, mock-up models, printed instruction sheets and lettered posters—guided the participants in the marking of I.B.M. tabulated score cards.

SIX CONTEST DIVISIONS

The contest was divided into the following six individual sections: candling of shell eggs, grading of broken out eggs, evaluation of poultry rations, identification of feed ingredients, management of laying hens and brooder house arrangement and management.

Typical comments from the instructors and participating students included, "this is the kind of contest you can study for," "the last man has the same chance as the first man," and "I can use this stuff at home where our hatcheryman does all of the flock selecting."

The newness of this type of poultry contest means that some adjustments and modifications can be expected in future sessions. However, the basis for and emphasis on this year's trial indicates it was on the right track.

We in the poultry department are looking forward to our next opportunity to challenge a group of these youngsters with the factors of management which will mean dollars and sense to them in later life. This is truly a contest in practical education. ☆

John L. Skinner is extension poultryman, University of Nebraska.

COUNTY AGENT AND VO-AG TEACHER

ag leaders speak up

BUILDING A BETTER "IMAGE"

I note in the March 1961 issue of the COUNTY AGENT & VO-AG TEACHER in a column by John Harms "Ag Leaders Washington" on page 10 that "Plans in the making call for the USDA land grant colleges and other public agencies to take the steps necessary to provide the public with information that will enable them to see the true economic position of agriculture. Farm organizations, a large number of which already favor such a program, will be called on to cooperate in the effort." We believe that our county is pioneering in starting this movement going. Last fall representatives of eleven county farm organizations met in a panel discussion and aired their views on this problem. They agreed to study this matter through a series of monthly meetings. They wanted me to act as chairman since they had confidence that I would handle the thing without bias to any organization.

In the months that have followed they have progressed a long way in learning to think harmoniously together. They agreed that the first step in building good public relations for farmers was (1) to clean their own house first, to work to better understand the organizations, their functions, and to learn how to work together. (2) To set the example to leadership at the top. One of the members said, "Our leadership at the top has failed us." The immediate problem they have tackled is working to get the members of the four milk marketing federations in the New York Milkshed to work more closely together and with that approach, if they can avoid, eliminate or reduce the public bickering, that would be the first step in working toward a better informational program for the general public.

We firmly believe that this program can only be successful if it starts and has the support from grass roots, that is, the county or community level throughout the country. Washington can be called on for help but certainly Washington, that is the Federal Government, should not initiate the venture.

We will be glad to supply you more information should you desire.

J. JOSEPH BROWN
County Agricultural Agent
Herkimer, New York

We're glad to hear about this outstanding program.—EDITOR.

"HAVE WE MISSED THE BOAT?"

The report by John Harms and George Peter in the April 1961 issue of the COUNTY AGENT & VO-AG TEACHER has aroused considerable comment. The interest generated has been equaled only by the lack of definite information. Thus, this letter to you.

I would be highly interested in determining the source of the information on which Mr. Harms and Mr. Peter based their comments. For example, what specific part of the President's educational program provides this chance for vocational agriculture to expand

its horizons? Where does this "more than two billions" appear in the budget recommendations? Even more interesting would be the source of the "advisory representation at the cabinet level."

If you can provide me with these sources of information I would be most appreciative. The mention of this in your magazine is the first inkling I have had of this development. Has someone been unearthing hitherto unpublished information? Or have we missed the boat out in the states by not reading our mail?

Thank you for your help.

MILO J. PETERSON
Professor and Chairman
Agricultural Education
University of Minnesota
St. Paul, Minn.

I read with interest the article by John Harms and George Peter on page 10 of the April issue of the COUNTY TEACHER & VO-AG TEACHER magazine. I am somewhat concerned, however, with their comment, "If vocational teachers and their organizations do not get on the ball, they will be left holding the well-known bag."

The above authors should know that Dr. Mobley, Executive Secretary of the American Vocational Association, met weeks ago with Mr. Ribicoff, Secretary of Health, Education and Welfare and in cooperation with the Office of Education, Vocational Education Division, recommended leaders in the field of vocational education to serve as an advisory committee in reviewing and evaluating vocational laws and programs. If Messrs. Harms and Peter know of a more effective way of getting the experts in the field of vocational agriculture together than through such a committee requested by President Kennedy, I would appreciate hearing what they have in mind.

As President of the American Association of Teacher Educators in Agriculture, I want to assure you that our organization of teacher trainers is anxious to cooperate in any way we can in not only maintaining, but improving the high-quality programs of vocational agriculture in the United States.

DAVID R. McCLAY
President
American Association of
Teacher Educators in Agriculture
St. Paul, Minn.

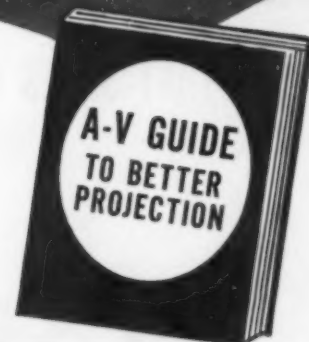
See "Ag Leaders Washington, Page 10."—EDITOR.

"FEATURES THOUGHT- PROVOKING"

... We appreciate the COUNTY AGENT magazine and believe you are doing an excellent job in covering the county agent and vo-ag fields. Your special features have been thought provoking and interesting.

EDWARD KOESTER
County Extension Agent
Gooding, Idaho

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Latest word from the Capitol—by John Harms and George Peter

ag leaders washington

What's holding up Vocational Agriculture's biggest opportunity to expand!

AT PRESS TIME we received several letters, all asking the same thing:

What can the vo-ag teaching profession do to expand its horizons under the boom of interest in vocational education now going on at top official levels in Washington?

So we asked around—and here's what we learned—Each opportunity offered under the new programs will call for a slightly different approach, depending on your needs, of course. But basically they all call for action in that place where it is usually best to start taking action—at home, of course, in your own state and local community.

You will have to move fast because White House and Congressional leadership in education have been acting fast. You may find programs getting underway in your State that leave you out simply because your state and national organizations have not shown interest.

Vo-ag teaching shares in the benefits of one-half billion dollars that will be made available as grants to States. In the language of the legislation, the grants are made, among other purposes, "to undertake special projects directed to special or unique educational problems or opportunities." Have you planned any special vo-ag projects, by any chance?

The funds are expected to be spent primarily for elementary and secondary school teacher salaries, but must be matched by State funds. Smaller amounts are expected to be spent to improve facilities. The Federal contribution to Vo-Ag in 1959 was over \$13 million. States matched this by \$53 million or greater than 4 to 1. The new funds are in addition to this.

Do you have a program for improving Vo-Ag in your State? The State is limited by law in determining how much may be spent for Vo-Ag. But if the new funds are in excess of what you have been allocated in the past, can you demonstrate a use in Vo-Ag for the increase? Some schools do not offer a Vo-Ag program. The increased funds may make it possible to inaugurate Vo-Ag in such schools.

The \$14.5 million authorized for occupational training—\$4.5 million for training and \$10 million for student subsistence—requires no State matching funds. Vo-ag may prepare trainees to work in agricultural services of all kinds—for example, farm implement and repair services, feed stores, or other agricultural occupations. Here is how an area qualifies for aid under this authorization.

Again—action on the home front. Your local community prepares a plan under the \$394 million dollar aid law which contains the funds for occupational training. (Vo-ag leaders would have to keep an eye out locally or the program could get off the ground without them!) The plan then goes to the U.S. Department of Commerce to determine feasibility. The next stop is the Secretary of Labor who would certify manpower needs in the area. He would consult with the Secretary of Agriculture on the place of the program in agriculture. Health, Education and Welfare Agency would then advise on the educational acceptance or rejection to the Department of Education in your State.

The new White House Committee on vocational training is being peopled with what one White House source called "wall busters." The committee's job will be to produce the first thorough-going study of vocational education needs since the original Act. Members will call the shots and make recommendations for changes to the White House directly.

How can Vo-Ag leadership cooperate with the committee? We hope to be able to give you the final membership line-up and the plans of the committee by next issue. Our "educated hunch" is nothing has been done so far. The committee is going to make recommendations which would in part have to go to Congress for approval before they become law. If Vo-Ags or their organizations want to suggest a program we are sure the committee will study it as it considers all other proposals. We think your action will determine what really happens in the final analysis!

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Research BULLETIN

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**FOLEX® . . . PAVES WAY
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DEFOLIATION INCREASES COTTON PROFITS

Chemical defoliation has been a boon to cotton farmers everywhere. By paving the way for mechanical harvesters, defoliants have streamlined the harvesting operation, cut harvesting costs, and increased farm profits.

Farmers who have been most successful with cotton defoliants have used them in connection with other wise management practices. This is important, for to get good defoliation everything from preparing the land to applying the defoliant has to be done right. For best defoliation results at harvest time, the farmer must prepare his land well...use good seed...have a uniform stand...use enough fertilizer...control weeds and insects...and have adequate moisture. Good defoliation depends on doing all these things.

PLANT CONDITIONS AFFECT RESULTS

Good defoliation depends, too, on plants being in the right condition at harvest time. Plant population must be uniform...plant height must be uniform...boll load must be uniform...nitrogen must be exhausted...there must be adequate moisture in the soil...the plants must be mature...and finally, the defoliant must be applied correctly.

These wise management practices and required plant conditions may be regarded as links in a chain. Good defoliation depends on strength in both the management chain and the condition chain. One weak link in either will reduce the effectiveness of the defoliant.

FOLEX OPENS NEW FRONTIER

The leading chemical defoliant for cotton is FOLEX — a product of modern research and development that has undergone thorough testing across the cotton belt. FOLEX is unique in that it allows defoliation practices not possible with older chemicals.

First, FOLEX removes bottom leaves, and thus prevents or reduces boll rot, without damaging the bolls and plants. Therefore, bottom defoliation with FOLEX solves a problem that has plagued cotton growers for many years.

Second, FOLEX saves growers costly and time-consuming delays in harvesting. Normally, high-yielding plants that are tall, and green are almost impossible to defoliate with one application. But a small application of FOLEX, applied about two weeks before total defoliation, will pre-condition the plants for total defoliation. This often eliminates the need for two separate total applications.

Third, FOLEX eliminates the possibility of burn and freezing of leaves from overdosage. It also eliminates the need for using a standard application rate regardless of conditions. With FOLEX, it's possible to adjust the rate to fit the situation. This cannot be done with defoliants which work only when plants are mature.

Recommendations given to growers under the FOLEX PROGRAM provide:

1. A complete defoliation schedule to assure satisfactory leaf removal;
2. A practical solution to the boll rot problem; and
3. A way to eliminate the need for two total applications on tall, rank, actively growing plants.

BOTTOM DEFOLIATION

ANNUAL LOSSES to boll rot largely go ignored, unchallenged or unrecognized in many areas of the cotton belt. The extent of these losses is often overlooked or minimized because inspection is limited to the relatively open ends of the cotton rows. Observations made in the middle of the field, however, will almost always reveal significant damage which can ruin as much as a bale per acre by harvest time.

It is estimated that cotton growers spend about \$52 per acre to grow their bottom crop. Loss of this crop to boll rot means the loss of the \$52 investment plus the potential income of at least \$82.60 for 250 pounds of lint.

Boll rot is not a necessary evil! Bottom defoliation with FOLEX solves this problem effectively and economically. One application of FOLEX drops leaves to the ground, permitting sunlight to penetrate and air to circulate. With the bottom bolls exposed to sunlight and air, boll-rotting bacteria and fungi just can't flourish. As a result, the grower can realize up to \$93.10 greater return per acre.

Bottom defoliation with FOLEX offers these benefits to cotton growers:

1. Prevents or reduces loss of bottom crop to boll rot.
2. Accelerates opening of the mature bottom bolls.
3. Maintains germination quality of bottom seeds.
4. Maintains oil quality and quantity of bottom seeds.
5. Facilitates early picking of the bottom crop.
6. Reduces shedding of healthy young squares.
7. Reduces lodging.
8. Facilitates total defoliation later.

Successful cotton growers are finding V-C FOLEX ideal for bottom defoliation because:

1. *FOLEX will not damage or scar unopened bottom bolls. Defoliant with a harsh chemical action can burn sutures, with the result that bolls will not open properly.*
2. *FOLEX will not injure the stalks or growing tips of cotton plants, and so will not interfere with normal*



↑ **BEFORE:** Rank growth prevents sun from penetrating and air from circulating—the ideal condition for boll rot.

↓ **AFTER:** Bottom defoliation by FOLEX has exposed bolls to sunlight and air, preventing boll rot.



development of the top crop. Harsh chemical defoliant have been known to reduce total yield.

3. *FOLEX drops leaves while they are green—with enough green weight to keep them from catching on branches and open bolls. The result is less trash in the lint at picking time.*
4. *Bottom defoliation with FOLEX provides a greater return per dollar invested than any other practice in cotton production.*

Timing of FOLEX application for bottom defoliation will vary depending on growing conditions. In some areas, bottom defoliation will precede

Estimated Profit Increase from FOLEX Bottom Defoliation Based on a Bale per Acre Crop

Benefit	Estimated Value per Acre
Eliminate or reduce boll rot (1/4 bale)	\$41.30
Speed opening of bottom bolls (1/10 bale)50
Maintain germination quality of seeds	2.50
Expedite early picking (1¢ per lb.)	2.50
Reduce lodging (save cost of bottom defoliation)	4.00
Reduce shedding (1/4 bale)	41.30
Expedite total defoliation (eliminate 2nd application)	5.00
Total estimated value per acre	\$97.10
Cost of V-C FOLEX, including application	4.00

TOTAL INCREASED PROFIT PER ACRE \$93.10

total defoliation by more than two months, in others by less than a month. Exact timing for each field should be determined by inspection. The time table at right may be used as a guide.

If bottom defoliation is to give maximum benefits, leaves should be removed from at least the lower 18-24 inches of the plant. When bolls are mature (firm to thumb pressure) to this height, it is time to bottom defoliate without delay.

Should boll rot threaten the crop before the bolls mature to this height, FOLEX should be applied up to the level of the highest mature boll, even if it is only 12 inches from the ground. This can be accomplished by regulating the nozzles of the spray equipment. When the bolls mature up to another 12 to 18 inches, a second bottom defoliation should be made. This may be repeated throughout the season until only the very top foliage remains. The plants can then be machine picked without a total defoliation application.

Under certain conditions, when boll rot damage is delayed, bottom defoliation may also be delayed, thus making it possible to remove the leaves from the lower 24 to 30 inches with one application of FOLEX. However, unless there is no sign whatever of the presence of boll rot, it is better to reach

State	Area	Usually Apply Between
Texas	Rio Grande Valley	June 15 — July 1
California	Imperial Valley	July 15 — Aug. 15
Arizona	Yuma Valley	July 15 — Aug. 15
Arizona	Other Locations	Aug. 1 — Sept. 1
California	San Joaquin Valley	Aug. 1 — Sept. 1
Texas	Brazos River Bottom	Aug. 1 — Sept. 1
Miss., Ark., La.	All	Aug. 1 — Sept. 1
Texas	El Paso	Aug. 1 — Sept. 1
Texas	Trans-Pecos	Aug. 15 — Sept. 15

30 inches by two successive applications.

One general rule will serve to cover practically all situations, regardless of the area; when the plants touch in the middles, boll rot is sure to follow and FOLEX should be applied immediately for bottom defoliation.

Bottom defoliation requires ground equipment such as the high clearance spray rigs manufactured by Hahn, Inc., the John Blue Co., Barantine and others. Tractor mounted rigs may be adapted to do this type of spraying, although self-propelled machines are most commonly used. The essential requirement is a nozzle arrangement

which can be adjusted to give complete coverage up to the desired height.

Four fan nozzles (e.g. $\frac{1}{4}$ T 80015 at 30 psi) or two flooding nozzles (e.g. $\frac{1}{8}$ K 1.5 at 30 psi) per row should be used, with nozzles positioned so that the upper edge of the spray pattern is parallel to the ground.

Speed (usually 3 mph) and pressure should be adjusted to give fine droplets always maintaining the correct total spray volume per acre of 10 to 15 gallons.

For effective bottom defoliation, FOLEX should be applied at the rate of one gallon per six acres ($1\frac{1}{3}$ pints per acre).

PRE-CONDITIONING

DEFOLIATION of tall, rank, dense or actively growing cotton plants at harvest time has long been a problem. Complete spray coverage under these conditions is almost impossible because of the physical barrier to penetration by the defoliant. This is further complicated by another barrier when nitrogen is still available to the plant at harvest time, thereby retarding abscission.

Modern cultural practices aimed at high yields have created these barriers. Attempting to overcome them, many growers have used two separate applications for total defoliation. This is costly and delays harvesting. Results have not been completely satisfactory.

Now, the unique properties of FOLEX make it possible to pre-condition the plants prior to total defoliation. Pre-conditioning is easy and inexpensive because FOLEX may be added to the last insecticide application. Or, even if it should be necessary

or desirable to make a separate pre-conditioning application, the benefits far outweigh the cost. This new use of FOLEX aerates rank growth, induces maturity of green plants and paves the way for one successful total application.

Pre-conditioning with FOLEX will

defoliate the mature bottom leaves ... condition the top green leaves ... induce the same degree of maturity throughout the field ... eliminate the necessity of two applications ... reduce late season losses to boll rot ... reduce late season insect infestation ... and accelerate opening of mature



This rig sprays the bottoms of plants on several rows each trip across the field.

bolts.

This new defoliation recommenda-



Closeup of spray nozzles, set for bottom defoliation. Each spray boom has four nozzles: two for each side of the row.

tion is possible with FOLEX because:

1. *The natural action of FOLEX accelerates the aging process within the cotton leaf.*
2. *The young top bolls will not be injured and will continue to grow to maturity.*
3. *FOLEX presents no fire hazard when mixed with insecticides.*

FOLEX, applied as a pre-conditioner, will also greatly increase the efficiency of hand harvesting. Complete or total defoliation is often not necessary when cotton will be harvested by hand. However, FOLEX, applied as a pre-conditioner, will add as much as an hour per day to picking time.

When FOLEX is not applied to tall, dense cotton, pickers must wait in the morning until the plants dry, take the time to hunt for open bolls, put up with

bothersome insects, straighten lodged plants, and finally quit early when dew begins to collect on the leaves.

FOLEX makes hand harvesting quicker and easier because it removes these problems. It not only makes hand picking more efficient and therefore less costly, but it also makes it possible to start harvesting earlier.

One-half pint of FOLEX per acre is all that is needed for pre-conditioning. This should be applied by airplane or by overhead boom on ground equipment approximately two to three weeks before the desired time for total defoliation, or, in the case of hand picking, two to three weeks before harvest. A pre-conditioning application of FOLEX will cost only 80 cents per acre and there need be no additional cost for application if it is applied with the last insecticide spray.

TOTAL DEFOLIATION

UNDER normal conditions, it is safe to apply FOLEX when fiber quality of the top bolls will not be damaged by loss of the top leaves which feed these bolls (when top bolls are firm to thumb pressure). FOLEX will not damage the bolls directly or cause them to open prematurely.

If FOLEX was applied as a pre-conditioner, apply $1\frac{1}{2}$ pints per acre in water for total defoliation. If night temperatures fall consistently below 55° at time of application, use white diesel oil instead of water (see table for gallonage).

The table at right should be used as a guide when plants have not been pre-conditioned but can be defoliated satisfactorily with one total application.

RAIN following application of FOLEX in water will not reduce the effectiveness, if it has been absorbed by the leaf. Conditions which delay absorption are primarily those which cause the cotton leaves to be wilted, toughened, or leathery. When these conditions prevail, use diesel oil instead of water.

HOW TO APPLY: Ground machines should have at least 5 nozzles per row including one overhead nozzle and have pressure and speed adjusted to give fine droplets yet maintain the correct spray volume per acre. Aerial applicators should fly as

	DEFOLIATION CONDITIONS		
	IDEAL	AVERAGE	ADVERSE
Minimum Night Temperatures	Above 65°F	$55^{\circ} - 65^{\circ}\text{F}$	Below 55°F
Pints Per Acre FOLEX	$1\frac{1}{2}$	$1\frac{1}{2} - 2$	2
Apply In	Water	Water	Diesel Oil
Gallon Total Spray Per Acre: Air	5-12	5-12	5-8
Gallon Total Spray Per Acre: Ground	15-25	15-25	10-15

close as possible to the plant tops. Avoid application during the excessive temperatures of mid-day and when winds may cause drift to adjacent fields.

SPLIT-AIR APPLICATIONS: Pre-conditioning will usually eliminate

the necessity for two total applications. However, when leaves are extremely tough or plants badly lodged, it may be desirable to follow the initial total application in approximately 5-7 days with a touch-up treatment. If so, use $1\frac{1}{2}$ pints FOLEX per acre in white diesel oil. (see table).

Defoliate with **FOLEX** 

VIRGINIA-CAROLINA CHEMICAL CORPORATION • CHEMICALS DIVISION • RICHMOND, VIRGINIA



It's house cleaning time

By JOE B. WILLIAMS

How about doing a little spring house cleaning? It has been called to our attention several times lately that equipment furnished to counties has not been receiving proper care. If this equipment is kept in good condition and periodically cleaned and inspected, it should last at least 15 years—and even longer before there is likelihood of a major breakdown.

CHALKBOARDS

One of the most valuable meeting aids for small groups is the chalkboard. Chalkboard surfaces are hardy enough to withstand long use. However, if these boards are transported from one locality to another with little care given to protection of the writing surface, they will become so scratched and scarred that they are no longer meeting aids, but rather meeting hindrances.

If you use the chalkboard daily, clean it daily. Best way to clean a chalkboard is to dry clean it. First, clean the eraser from dust and wipe it across the board. After going through this process three or four times, wipe the board with a soft cloth or dry chamois skin. Be sure to re-dust the eraser.

If finger marks or other minor stains remain on the chalkboard, they can usually be removed by means of druggist's pumice which should be available from your local drugstore. The pumice should be applied with a clean, damp cloth and the board cleaned gently. If pumice is not available, a wet cake of Bon Ami can be applied directly to the board surface. Be careful not to over-use the Bon Ami as it can damage the surface worse than chalk and wet rags.

SCREENS

Since the insect season is with us about half the year, it will pay to be a little careful each time you roll up the screen after each night meeting. Some-

Mr. Williams is visual aids specialist, extension service, University of Kentucky.

times insects can drop along the roller and will be mashed over a 5 or 6 square-inch area of the screen when it is rolled up.

The screen is covered with minute glass beads and getting smashed bugs loose is not always easy.

A paint brush used very lightly over the damaged area will sometimes work, although there is not a good method of getting the bugs loose. Be careful in using the brush as you may scrape off some of the beads and lose some of the screen's reflecting ability.

A little inspection of the roller before putting the screen away will prevent this trouble and the \$20 cost of replacing the screen fabric.

SLIDE PROJECTOR

A slide projector represents a \$100 investment. This amount may seem small, but your projector should last over 15 years. The life of a projector bulb is rather unpredictable, varying from 10 to 25 hours (depending on manufacturer). If the machine has been operated for several minutes, the bulb filaments are very brittle and will shatter when the machine is jarred. Therefore, it is desirable to let the blower run about 5 minutes after showing your slides. If you are afraid the noise will annoy your audience, at least let the machine remain in one place until the bulb has cooled. Projector bulbs will give up to 50 hours service if these precautions are observed.

The projector lens should be cleaned with a soft cloth or lintless tissue. A dirty lens will not do your slides justice.

About once a year, the condensing lens and heat-absorbing glass should be cleaned. Be very careful in removing and replacing these bits of glass because each costs \$5. If you have difficulty in getting them properly seated, read the instruction booklet that came with the projector. Above all, *do not force any part of the machine*. Each item is designed to fit in place and a little care will prevent any damage to the parts.

TAPE RECORDERS

The most expensive piece of meeting equipment furnished you is the tape recorder. We have had several of these returned to us because the volume and tone quality had depreciated. In all but about 7 per cent of the cases, lack of quality was caused by dirty recording heads.

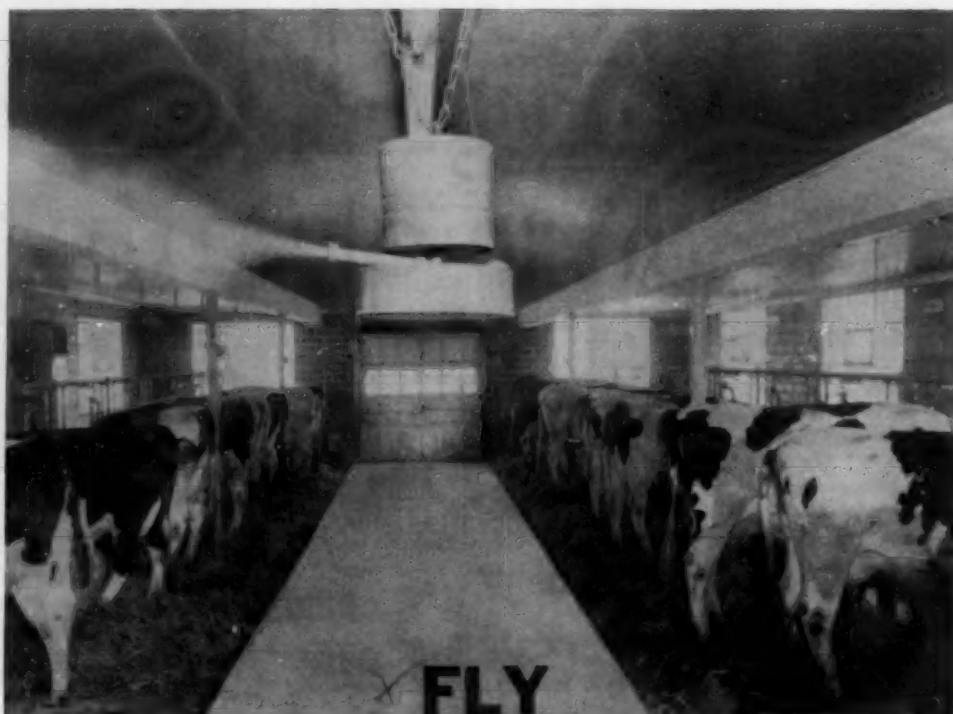
It takes only a small amount of dirt to really ruin the quality of an otherwise good tape recording. The heads should be cleaned about once a month with a small cotton swab and carbon tetrachloride. Simply dip the cotton in a solution and brush it across the recording heads two or three times and allow the heads to dry. If you have any doubt as to the proper procedure, the local radio station engineer can give a quick demonstration or may even be glad to do it for you. You will be surprised at how much dirt can accumulate on the heads and how much better the tapes will sound.

Like the slide projectors, the tape recorders are designed so that each little part will function properly. Forcing any part that is not designed to be forced might result in a costly repair bill.

STORING OF EQUIPMENT

Do you have a central storage place for your meeting aid equipment? Of course, the chalkboard cannot be stored away, and seldom do you have a cabinet large enough for the screen; but you do have a cover for the screen. The cover not only protects the screen from scratches and dents, but insects and dust as well. Nobody likes to look at projected aids on a dirty or spotted screen.

We have yet to have a projector brought into the office for a general checkup without its being very dirty. The same would probably hold true for tape recorders, except they are probably used more often than projectors, and dust has little opportunity to accumulate. When not in use, keep these two machines in a storage cabinet or at least covered by a sheet of plastic. ☆



CONTROL ON DAIRY FARMS

By L. K. CUTKOMP

FLY control in the eyes of a dairy farmer could be described as going from the sublime—DDT some fifteen years ago—to the ridiculous, today.

Today, we might see this format for a recommendation: "Initiate, in early season, a program of sanitation combined with chemicals A, B, or C applied as baits or sprays.

"If these insecticides are inadequate, substitute compounds X, Y, or Z, using X or Y in fogging equipment, or Z as a liquid spray. Materials X and Z are permitted on the animal but at a lower concentration. Unsatisfactory performance can be overcome, in most instances, by using dusts of compounds D or E, but only on the animals. However, valuable supplements to the fly control program will include mechanical animal treating devices such as back-rubbers, electric-eye sprayers, plus properly treated cords and fly bands as per label directions.

"Two new fly killers, P and Q, actually appear to be the most effective and long-lasting against resistant flies, but recommendations must be withheld, pending official approval. Final approval before the fly season remains in a state of dubiety." And so it goes.

Seriously, fly control on a dairy farm is difficult. Solving the problem does require a combination of methods and usually more than one material. The housefly resistance, not only to DDT and relatives, but to some organophosphates, requires different materials and several approaches. The control of flies infesting the animals also requires different techniques. Along with these problems, there are limitations on chemicals which can be used on animals. Such limitations safeguard our important supply of milk and other dairy products and ensure a supply of meat which is free of chemical hazard.

Recommendations can best be divided into two parts, *barn treatment* primarily for housefly control, and *animal treatment* for biting flies and the face fly. Biting flies include horn flies, stable flies, and deer and horse flies. The face fly, a new pest of the east, southeast, and midwest, does not bite, though its habits are extremely annoying to cattle.

Barn Treatment

A dairy farmer must control flies in the barn if he is to meet the sanitary re-

quirements for producers of milk and other dairy products. To do so requires a coordinated program of sanitary measures combined with effective fly killers used properly to prevent any hazard to the consuming public.

Sanitation Measures

A good fly control program must include frequent removal of manure from barns, including calf pens especially. Such material may be spread out thinly on fields so that it no longer serves as breeding media. Other breeding areas are moist silage, grain, or hay spilled and trampled on the ground. These situations serve for breeding of both houseflies and stable flies. They should either be removed or treated with 0.2 per cent Diazinon ($\frac{1}{4}$ pint of emulsifiable concentrate in 5 gallons of water). Ronnel may be used at $1\frac{3}{4}$ quart in 5 gallons of water. Such mixtures are used at the rate of 1 gallon per 100 sq. ft.

Chemical Control for Adult Flies

Chemical treatment in the dairy barn can utilize four different approaches, or certain of them in combination. They are: 1) residual sprays, 2) baits, 3) fog-

COUNTY AGENT AND VO-AG TEACHER

ging, and 4) strings or bands.

Residual sprays listed in table 2 will be used in many areas. Where fly resistance to approved organophosphates exists, such sprays may not be valuable. Such difficulties with resistance seem to exist in several of the dairy areas of eastern United States.

Effective fly killers such as Dimethoate and Bayer 29493 will provide residual control, but label approval by regulating agencies is lacking.

Fly baits, applied in liquid, granular, or wettable powder forms, can be ranked as second in importance to residual surface sprays. They assume greater importance, however, when flies are not readily controlled by the residual materials. Table 1 presents information about their use. Baits should be used early for good fly control. Don't wait until the flies are a real nuisance.

Fogging devices for use in dairy barns will kill all flies in the barn at the time of treatment. The familiar fly-killer, pyrethrins plus piperonyl butoxide, is most commonly used as the effective spray material. Daily treatment is required during the fly season. The expense is somewhat greater than residual spraying and control of biting flies on the animals may not be adequate.

The use of fly cords or bands has given good results in some situations, but good sanitary measures loom as very important with this type of treatment. The insecticides parathion and Diazinon are commonly used on cords which must be strung out in a sufficiently adequate pattern to be effective.

Follow label directions. A commonly recommended rate is to use 300 linear feet of treated cord for each 1000 square feet of floor area.

Animal Treatment

Biting flies, which suck blood from cattle, and other annoying flies are sources of irritation. They prevent cattle from grazing normally. There is good evidence that horn flies, stable flies, deer and horse flies are so disturbing that milk production is reduced. The face fly, though non-biting, can now be added to that list.

Sanitation, so valuable in housefly control, will aid in stable fly control. It is less useful with the other flies. This is true because horn flies and face flies breed in fresh cow pads usually found in the pasture. The deer flies and horse flies grow in marsh and water environments where sanitation is not feasible.

In short, the fly problem on calves and dairy animals requires direct animal treatment. This may be accomplished by repetitive applications, either by the dairyman or by some treating device designed to minimize man's labor.

Approved spray materials for use on dairy cattle are limited. Most commonly a pyrethrins spray is combined with a

repellent (MGK-11, MGK-326, Tabatrex, or Crag Fly Repellent). One of the thiocyanates, Lethane or Thanite, may replace pyrethrins in the combinations. These materials are desirable, not only because of effectiveness, but because they may be safely applied. Their use does not result in a chemical residue in the milk or dairy product. An oil base spray, used at not more than two ounces per animal, is convenient if it is atomized well for good coverage. Otherwise, the emulsified materials may be mixed with water and sprayed more liberally on the animals.

Approved dusting materials, methoxychlor or malathion, will provide good control of horn flies on cattle, but will have little effect on stable flies and face flies. One tablespoon of 50% methoxychlor or three tablespoons of 5% malathion may be used per animal. Such dusts must be applied carefully so that milk or milking utensils may not be contaminated.

Face Fly Protection

The face fly must be given separate consideration because of special measures of treatment. Daily treatment using a 0.2% DDVP bait (in a 75% corn sirup base) is recommended. This material is brushed on the face of the animal, using a six inch stroke from the forehead down between the eyes. The amount used should not exceed two-thirds of a teaspoon. Other measures include sponging or wiping face areas with pyrethrins plus a synergist combined with an approved repellent. Repellents are not recommended with DDVP.

Several devices are appearing on the market to facilitate treatment of dairy

cows. All are designed to save labor. All of the current ones employ liquids. The simplest is the cable-type back-rubber. This is a very useful device for treating the backs of cattle. Spray materials for dairy cows are limited to those approved liquids.

Automatic or semi-automatic sprayers are designed with a boom and nozzles to spray over the backs and legs of the cattle. The sprayer may be installed over a doorway or at the end of a chute.

The starting mechanism may involve an electric eye, but less expensive devices employ a 'gate' or lever which is pushed by the animal as she walks toward the feed lot. The mechanism operates to release the spray material at the proper time.

An air compressor and suitable valves make up additional necessary items. Such mechanisms do not require much maintenance and insure the dairyman of routine uniform treatment of his cattle.

Today's dairyman must control flies for reasons of sanitation and health. He must also control flies which may be so annoying to animals as to reduce milk production. His methods must include sanitation plus well-regulated and consistent use of efficient chemicals. Such chemicals must not be hazardous to the milk-consuming public.

Available automatic devices can reduce his labor costs and provide a uniform, consistent fly control program. He may be alerted to any advances in control methods by contacting his dairy associations, and state and federal agencies concerned with pest control on livestock. ☆

Dr. L. K. Cutkomp is in the department of entomology and economic zoology at the University of Minnesota.

Table 1. Materials to Use for Fly Baits

INSECTICIDE	FORM	AMOUNTS TO USE IN 2½ GALLONS OF WATER	
		INSECTICIDE	POUNDS OF SUGAR
DDVP	0.5% prepared liquid		
Diazinon	25% emulsion	2 cups	1
Diazinon	25% wettable powder	1 lb.	1
Dibrom	41% emulsion	¾ cup	1
Dipterex	1% powder	1½ cups	1
Malathion	57% emulsion	1 cup	½
Ronnel (Korlan)	24% emulsion	1 quart	½

(Granular or powder forms of most of the above materials are recommended.)

Table 2. Dairy Barn Spray Materials and Recommended Rates for Application to Surfaces

INSECTICIDE	FORM	AMOUNT USED IN 5 GALLONS OF WATER	
		INSECTICIDE	POUNDS OF SUGAR
Diazinon	25% emulsion	1½ pint	
Diazinon	25% wettable	1½ pounds	
Dibrom	41% emulsion	½ pint	
Malathion	57% emulsion	1 pint	
Malathion	25% wettable	2 pounds	
Ronnel (Korlan)	24% emulsion	1½ pint	

late research

- *A tiny mite that likes fly eggs for a diet may defeat the house fly*
- *Scientists study "topsy-turvy" treatment for radioactive-fallout contaminated soils*
- *In recent tests weaning pigs at three weeks was more profitable than at six weeks*

Value of nitrogen fertilizer for growing corn was proved again in a recent series of experiments at the University of Kansas Agricultural Experiment Station. Plots which received no nitrogen had reduced yields the second year of a continuous corn-rotation test (on land previously cropped for 30 years on a four-year rotation). But those which were fed 50 or 100 pounds of nitrogen an acre the second year showed normal yields.

The first year, the no-nitrogen plots did almost as well as those getting nitrogen, according to A. L. Hatfield, J. W. Shane and Frank Loeffel, agronomists. Differences appeared the second year, when the in-the-ground nitrogen had been exhausted.

Two new granular chemicals—zytron and dacthal—show promise in controlling crabgrass in lawns, reports M. N. Dana, horticulturist at the University of Wisconsin.

The pre-emergence materials must be applied early enough and at a rate sufficient to kill the seedlings as they emerge. The biggest difficulty, Dana feels, is convincing people that they have a crabgrass problem before they can see the young plants becoming established.

Tests last year showed that early treatment granular materials were slightly superior to spray applications. Presumably, granules reach the soil surface without interruption while spray materials are intercepted by grass leaves. In the 1960 tests one application at 15 pounds per acre of actual zytron brought nearly perfect control of crabgrass with no perceptible injury to bluegrass turf. The material also gave considerable control of common and mouse ear chickweed. Dacthal provided very satisfactory control with no injury to bluegrass. Dana suggests this material be used with caution on bent grass until more information is available.

Pigs on steel mesh made 19.5 per cent faster gains than pigs on concrete floors in a series of 14 tests at the University of Illinois. The test involved 728

pigs weaned at two to three weeks of age. All pigs, regardless of flooring, received the same rations and experimental treatment. Feed required per pound of grain varied, and neither type of flooring affected it considerably.

Swine researcher A. H. Jensen observed that pigs showed no adverse effects from being on the steel-mesh floor. They stayed much cleaner than those on concrete. A woven overlay was provided as a sleeping area, and pigs used the overlay except during hot weather, when they preferred the cooler mesh.

A tiny mite that likes fly eggs for a diet may defeat the house fly, famous for its ability to develop resistance to chemical fly killers. The mite lives in manure piles where flies like to lay their eggs. L. D. Haws, University of Wyoming insect research scientist, has found that a single mite can destroy 5 or 6 house fly eggs every 24 hours for a 30-day period. Haws has received a two-year \$21,752 U. S. Public Health Service research grant to study the tiny fly-killing insects in Wyoming.

"Topsy-turvy" treatment of soil may supply us with an adequate, contamination-free food supply in the event of a serious radioactive fallout problem.

O. W. Beale and Ronald G. Menzel, soil scientists with the Agricultural Research Service, USDA, are conducting research in the treatment of soil and crops that have been contaminated with radioactive fallout. They are quick to point out that fallout isn't an urgent problem in soil and water conservation now, but in case of nuclear accident or war it might become more urgent than any other soil and water problem.

At the Pee Dee Station in South Carolina, scientists are literally "turning the soil upside down" by deep plowing. Top four inches of the soil are removed and covered with the 4- to 14-inch and the 14- to 24-inch layers. The layers are replaced so that the 4- to 14-inch layer is on the surface, the 14- to 24-inch layer next, and the top four inches on the bottom. This puts the Strontium-90 down deep so that amounts of radio-

active materials taken up through the roots of plants may be reduced.

However, Beale admits that the treatment creates one problem—the mixture of top and subsoil left on the surface is not as fertile as original topsoil. He says "This problem can probably be solved by fertilization and building up the tilth of the soil . . ."

Weaning pigs at three weeks was more profitable than at six weeks in recent research at the Florida Experiment Station. A total of 26 sows and their litters were involved in the study. Tests were made during summer, winter and spring seasons. The researchers recorded feed costs for pigs to eight weeks of age, feed costs for sows from farrowing to weaning and weight loss of sows.

Cost per pig was less for the three-week group in summer and winter, but slightly more during spring months. Average of all groups showed that pigs weaned at 6 weeks cost the grower 26 cents more per pig than those weaned at three weeks. Feed costs averaged \$3.82 for each pig weaned at three weeks, \$4.08 for pigs weaned at six weeks. Labor costs, which were not figured, would be higher for the sow with pigs than for only the pigs.

Early-weaned lambs can make satisfactory gains and have fewer internal parasites with no increase in death losses, according to University of Illinois tests. Lambs weaned at six and nine weeks of age were used.

Before weaning, lambs were creep-fed the same ration they were self-fed after weaning. Fed in meal form, it contained ground shelled corn, high-quality ground mixed hay, soybean meal, vitamins and minerals. Lambs made satisfactory gains immediately after weaning as well as during the entire study. Gains for all lambs, regardless of age at weaning, averaged almost 1/2 pound per head. Previous tests which showed that lambs have fewer internal parasites when they are not allowed to graze with ewes, were confirmed by this test.

COUNTY AGENT AND VO-AG TEACHER

SULPHUR
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derivatives
benefit
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SULPHUR IN PLANTS AND SOILS



Texas Gulf Sulphur Company

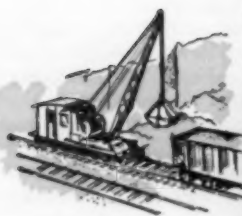
SOILS DO NEED SULPHUR!

A re-examination of mineral requirements in crop-soils is very much in order.

In the wide and successful search for providing better soil foods based on the important triumvirate 0-0-0, there appears to be somewhat of a let down in studies of other soil minerals—the need for sulphur, for example. Tests indicate that there is a danger—even actual existence—of a sulphur deficiency in soils where certain crops requiring sulphur are grown.

To aid in this re-examination of sulphur values, we have prepared a 28 page booklet titled "Sulphur in Plants and Soils" which is edited by a well known authority on this subject. Write for copies not only for yourself but for others you feel would be interested.

This brochure is Section V of our extensive Sulphur Manual discussing many phases of Sulphur. Section VI — Sulphur in Plant Diseases — will be available shortly.



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Hurld gives farmers 3 chances to say "No". . .



By CHARLES L. STRATTON

"EVER watch a farmer 'read' his mail?", Daniel P. Hurld Jr., popular Essex County (Mass.) agricultural agent asks. "Many farmers don't. Seventy-five per cent of it is discarded between mailbox and house, the rest is set aside for reading that evening. Make sure he reads your releases."

How? "By adding gizzmos," Hurld replies, "to bring in human interest. Something funny happen at the last meeting? How about a quiz with trick answers? Anything that'll get them to look forward to your releases."

Hurld claims plain form letters are cold. He finds gizzmos add interest, make the farmer want to open the release and read it—first. If he can get a farmer to read it he's got his foot in the door and a chance to get his message across.

He figures a farmer's time is valuable. "Stick to form," he says, "but first hit him quick with something that'll get his interest—a hot topic, then bring in the date, time and place. I put the gizzmo in different places. They've got to read the letter to find it."

He doesn't go in for jokes, preferring short human interest items. Personal happenings—like the time a prominent dairyman tried fastening a fishline to a kernel of corn to catch a pigeon. (He almost caught the pigeon but the line broke.) Frequently he decorates with a suitable line drawing.

"Don't bluff, fool your readers, or make up stories," he warns. "If they don't believe you they'll lose interest. If it's harmless gossip about a county dairyman, I phone him first to see if it's okay to mention it in the release."

Other times Hurld may use true and false quizzes, juggling sentences so they

"Gizzmos"

Boost Meeting Attendance

can't be answered correctly. He warns not to use anything that will give harmful information. He finds people discuss it at home, then come to the meeting to see if he made a mistake. This is what he intended it to do—bring it up in a discussion.

In one particular sheep grower's letter he asked for the characteristics of a certain breed of sheep. (Hurld made up the breed.) Sheepmen couldn't recall it, pulled out their handbooks and tried to find it—meanwhile *studying their handbooks*.

"On dry subjects like diseases," Hurld says, "stuff farmers should read but don't because it looks boring—put a gizzmo in the covering letter to draw their interest, then in the last line point out why they should read the attached leaflet."

Hurld stresses the importance of farm releases. Quite often they are the only contact and deciding factor whether a farmer will attend a meeting. He puts a lot of thought and effort into writing this type of letter, then rearranges and checks to see whether he says what he

intended to say. (Once he wrote cattlemen that there were cattle lice around and they probably had them too.) He finds the best way is to leave a letter overnight and check it again the following day. He tries to keep the message on one page because he finds readers lose interest if the material is too lengthy.

After the stencil is made, he checks it over, usually underlining, adding arrows or personal comments with a stylus before mimeographing.

In some cases he'll add a personal note on the mimeographed copy — "Hope you can make it, etc."

PLANNING A FARM MEETING

When planning a farm meeting Hurld locates several leaders within the county, farmers other look up to and are eager to visit. He tries to arrange for broad interest at the one meeting. In one particular farm meeting he tied in 1) owners who were well known to visiting dairymen, 2) outstanding field crop program, 3) new gutter cleaner and remodeling, 4) historical home 5) a good, overall farm program.

Prior to a farm meeting Hurld pays an observation visit to two or more farms—keeping in mind a number of questions. Would the program on this particular farm interest other dairymen? Is the owner sociable? Does he believe in the subject to be discussed? Is the farm easy to get to? What about parking facilities (no busy streets)? Barn ventilation?

After giving the visits a lot of thought, he calls up county leaders for their opinion. When a farm is selected he pays it a second visit to bring up the subject of a meeting. "Never put the heat on," Hurld warns. "Also tell him to ask his wife what she thinks about it. Later I call up a third time to see if it's okay. I've never been refused yet."

SETTING THE DATE

Hurld likes to send out releases several days before a meeting. "If it's on the 21st," he says, "they should get the letter on the 18th."

On extremely important subjects he holds three meetings, one in each section of the county, i.e., morning, afternoon and evening.

"That gives a fellow three chances to say no," Hurld explains. "He can take his pick of the meetings—they're identical except for location. I often have the farmer where the meeting is to be held call up his neighbors and extend a personal invitation."

Hurld arrives at a meeting early, tacks up location posters or arrows for visitors, then keeps the meeting running smoothly. Farmers read Hurld's releases and find his meetings worthwhile, an attendance-boosting combination. Make sure your releases get read—make your releases and your meetings interesting. ☆

FARMER FILE BOOK

How many farmers in town? It only takes a minute to find out in the thick looseleaf book used by County Agricultural Agent Daniel P. Hurld Jr., Essex County, Hawthorne, Mass., to list all the farmers in the county by towns. Each page, representing a town, lists all farmers in that town. Important data like herd and flock size can also be added.

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COUNTY AGENT
VO-AG TEACHER

MOLY-GRO

SEED TREATMENT

SPONSORED BY CLIMAX MOLYBDENUM COMPANY • 1270 AVENUE OF THE AMERICAS, NEW YORK 20, N. Y.

MOLYBDENUM AS AN AID TO CROPS

Many growers, in various areas of the United States, are reporting that molybdenum used as a plant nutrient increases yields and otherwise improves the growth of numerous crops. In 1960, some 3,200 soybean growers in the states of Illinois and Missouri treated soybeans with molybdenum. Two out of three reported increased yields and other benefits, such as faster starts, bigger plants, better pods and nodulation. In the Pacific Northwest, molybdenum applied to seed peas resulted in yield increases as high as 40 percent. In Georgia, the use of molybdenum on alfalfa brought about definite increases in yields over a 5-year period. In Florida, molybdenum is being used on citrus crops and, along the East Coast, it is being applied to vegetable crops. Alfalfa, soybeans, peanuts, peas, cauliflower, lettuce and spinach are among the crops which have responded favorably to molybdenum treatment.

WHAT IS MOLYBDENUM?

Molybdenum is a trace element—one of seven micronutrients scientifically recognized and accepted as essential to the growth and development of higher plants. Field tests, experience and the expenditure of more than \$200,000 in research at 16 colleges and universities throughout the United States have brought this vital element into the spotlight among agricultural trace elements.

HISTORY OF MOLYBDENUM

Identification of molybdenum as a specific growth factor in plant life came about in 1939 through experiments on tomato plants. It was found that culture solutions with 10 ppb of added molybdenum could completely prevent the molybdenum deficiency disease in tomato plants. The benefits of molybdenum were also verified in Australia, where, in the midst of unproductive areas, certain patches of soil were unexplainably productive. Investigation revealed that the reason for these increased yields was the presence of available molybdenum.

WHY PLANTS NEED MOLYBDENUM

Without molybdenum, the majority of plants could not survive, simply because it plays an essential part in changing the various forms of nitrogen into compounds which the plant can assimilate. Requirements are not the same for every crop. For example, legumes need more molybdenum than other plants do. Reason: the symbiotic bacteria living in the nodules of legumes must have molybdenum to convert nitrogen from the air into a form which the plant can use. If the plant receives too little molybdenum, nodulation is retarded and the amount of nitrogen "fixed" by the plant will be insufficient. It is a well known fact that the more nodulation and symbiotic microbial activity there is, the greater the build up of nitrogen and the more vigorous the plant growth.

HOW PLANTS GET MOLYBDENUM

Normally, molybdenum exists as a natural component of the soil. The amount occurring naturally, however, varies greatly from one area to another. Where molybdenum is plentiful, liming often releases enough to improve plant growth. But in many cases, supplemental molybdenum must be added to assure crop improvement.

Here's your farmers' guide to use o

RESEARCHERS ENCOURAGE TESTING

During the past six years, a number of Agricultural Colleges have carried on research to establish the degree of crop response to molybdenum applications. Many facts have been discovered, but still more needs to be known. As a result many growers are now helping out in the research programs by taking part in practical tests and reporting results to experiment station personnel.

WHAT FACTORS AFFECT THE AVAILABILITY OF MOLYBDENUM

A number of factors affect the amount and availability of molybdenum and determine whether or not it exists in a form which crops can use.

- Geological origin. The amount of molybdenum present in the soil usually depends on the molybdenum content of the geological material from which the soil originated. However, this does not always mean that a soil derived from a source high in molybdenum content will have an adequate supply for plant use.
- Age of soil. "Younger" soils may be better supplied with molybdenum than older ones. Older soils often weather and lose much of their original molybdenum due to leaching and other natural causes.
- Amount of rainfall. Molybdenum, in the form best absorbed by plants, may be leached out of the root zone by the movement of water. Conversely, in some arid or limited-rainfall areas—the Western States, for example,—the drying and wetting of the soil may produce an accumulation of soluble molybdenum to the point of toxicity.
- Acidity or pH of Soil. As soil becomes more acid, less molybdenum is available for plant use. Liming the soil may release molybdenum which is tied up by acidity. But there is no assurance that enough molybdenum exists to supply plant's wants. Some soils do not release sufficient molybdenum for healthy plant growth, even when they are well limed.
- Application of other materials. A number of materials—such as limestone, rock phosphate and mixed fertilizers—contain minute amounts of molybdenum. This molybdenum, however, seldom affects the total supply in the soil. Some elements retard the absorption of molybdenum. Others tend to stimulate its absorption. The effect of other elements on molybdenum up-take varies from one part of the country to another.

HOW TO TELL IF YOU NEED MOLYBDENUM

Chemical analyses of plants or soil often indicate whether or not you should add molybdenum. Such analyses, however, are intricate and results frequently fail to correlate with crop response. Visual characteristics of molybdenum deficiency often are not apparent. Often, too, they appear as nitrogen deficiency symptoms. Some crops, of course,

do exhibit specific symptoms such as the familiar "whiptail" in cauliflower. But, by and large, the only sure way to find out whether or not crops need molybdenum is to test by application, setting up comparison plots.

MOLYBDENUM NOT A CURE-ALL

The use of molybdenum does not always increase or improve crop growth under all growing conditions. Its effectiveness on crops appear to depend largely on local soil conditions, but other factors are involved. Usually, however, crops respond to molybdenum application under one or more of the following conditions: acid soils with a pH of 6.3 or less, soils low in organic matter, severely eroded or highly weathered soils, soils low in total-molybdenum content, sandy soils, or soils high in iron content. If one or more of these conditions exist in your soil, application of molybdenum may be beneficial.

ONE-YEAR TESTS NOT ENOUGH

A single year's testing may not provide an accurate test of molybdenum's effectiveness. This is because tests will be affected by many variables—soil conditions, rainfall, temperatures, and others. There are some indications that molybdenum may not have a beneficial effect during the first year of testing; however, significant results may be achieved during subsequent years. In the tests on Georgia alfalfa, for example, response was negligible during the first year. Over a five-year period, however, yields definitely increased.

CAN MOLYBDENUM BE TOXIC?

Under some conditions, excess molybdenum can be toxic. However, research and experience indicate that it is not likely to be so, except in a few areas.

TOXIC AREAS

Areas of molybdenum toxicity are primarily in the southwestern United States and Rocky Mountain territory. Here, due to low rainfall, an excess of molybdenum may accumulate in the soil. In certain other areas, excessive concentrations of molybdenum may exist due to geological phenomena.

IN WHAT FORM CAN MOLYBDENUM BE SUPPLIED?

Climax Molybdenum Company supplies molybdenum in three commercial forms: as a seed treatment, as a fertilizer additive, and as a foliar spray. Sold under the trade-name MOLY-GRO, these compounds provide an inexpensive, convenient way of giving plants an adequate supply of essential molybdenum. Cost of MOLY-GRO Seed Treatment, for example, is only about 35¢ per acre of soybeans. This low price makes testing extremely practical and often rewarding, since increased yields often bring growers as much as \$10 return per single dollar invested.

se of Moly-Gro seed treatment



Soybean rows, left to right: First row: control. Second row: lime plus molybdenum. Third row: Molybdenum only. Fourth row: lime only. Soybean plants, left, shows deficiency symptoms due to lack of molybdenum. Plant on right received molybdenum.

Photos above courtesy of Dr. K. C. Berger, Soils Department, University of Wisconsin.

APPLICATION OF MOLYBDENUM

Seed treatment. MOLY-GRO Seed Treatment is a commercial compound formulated with a bonding material which keeps the MOLY-GRO on the seed even after repeated handlings. In using MOLY-GRO Seed Treatment, proceed as follows:

- Dissolve MOLY-GRO in water (see table below)
- Pour solution over amount of seed required.
- Work seed well until thoroughly mixed (along with inoculant, if used).
- Let seed stand until dry enough to flow freely.

Fertilizer additive. A specially screened compound containing a minimum of 47½% molybdenum is blended easily with fertilizers or inert carriers.

Foliar spray. A crystalline powder, completely soluble in water and containing a minimum of 39% molybdenum is

Application rates.		
If planting rate per acre is	2 ozs. of MOLY-GRO Seed Treatment will treat	and will require
¼ bushel	1 bushel	1 pint of water
½ bushel	2 bushels	1 quart of water
1 bushel	4 bushels	2 quarts of water

added to liquid fertilizer or water for liquid application to soil or foliage.

When used as a foliar spray or fertilizer additive, approximately one pound of MOLY-GRO is needed per acre.

HOW TO SET UP A TEST PLOT

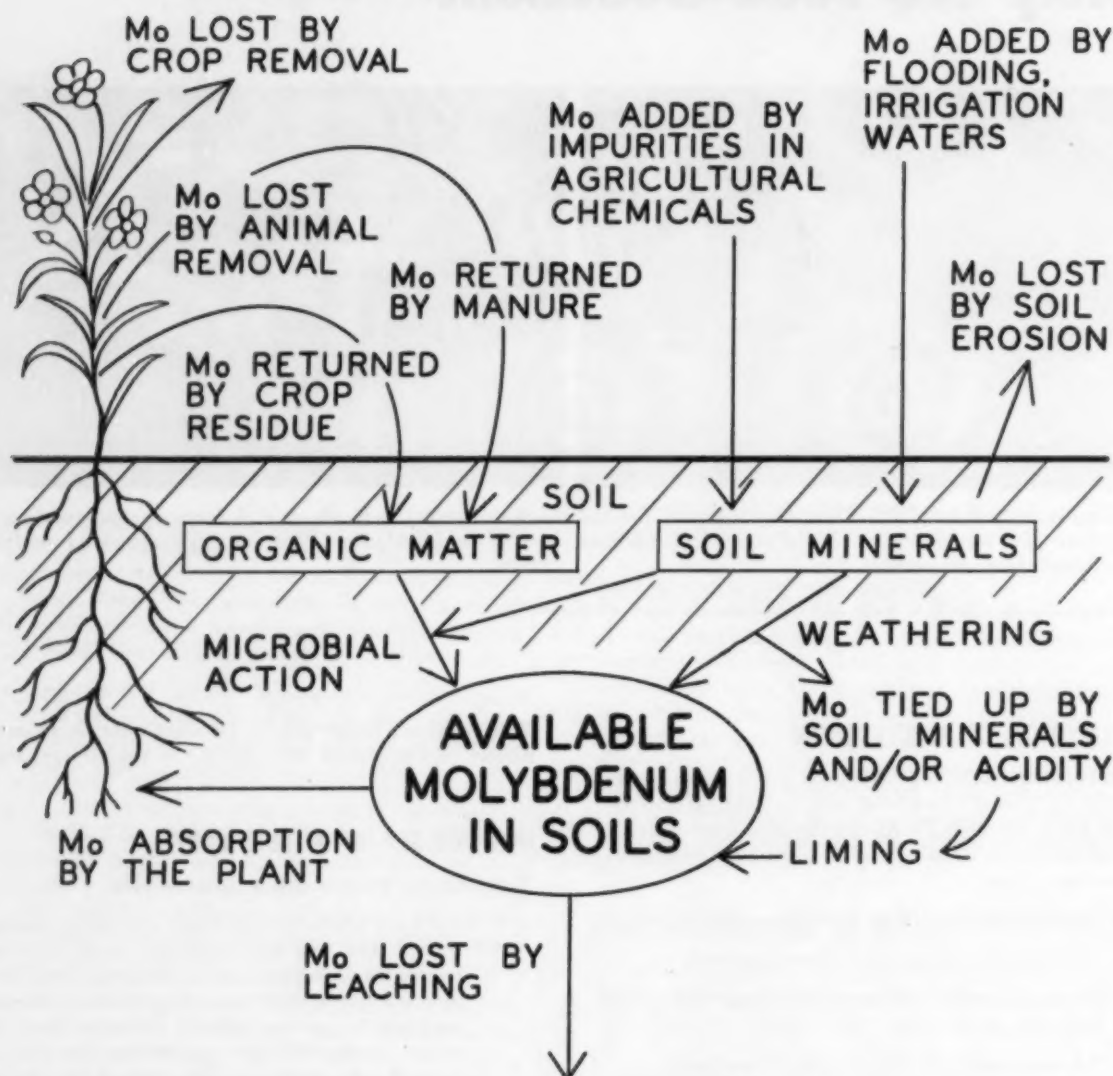
There are two ways of setting up a test plot:

- (1) Fill your left-hand seed boxes with molybdenum-treated seed. Fill the right-hand boxes with untreated seed. Normal seeding procedure will then give you two or four rows of molybdenum-treated seed and two or four rows of untreated seed. The return journey will give you the same number of rows of untreated and an identical number of rows of treated seed. Your field will thus be seeded in a pattern of alternate strips of treated seed and untreated seed. This method is an excellent way to evaluate visual response, but it may have drawbacks insofar as checking yield response is concerned. The reason is that because of differences in sizes of combines the crop might not be harvested precisely as the treated areas were planted.
- (2) Set up the field in strips wider than the above. These may be easier to harvest in order to get more definite, more comparative yield results.

CAN'T HARM PLANT LIFE

MOLY-GRO is a recognized scientific plant nutrient. It cannot harm plant life. Accordingly growers have everything to gain and nothing to lose by using MOLY-GRO. Many have already found it beneficial to their crops and their profits. There is every evidence that more growers can benefit in a similar manner.

BALANCE OF MOLYBDENUM IN SOIL



This schematic diagram demonstrates how Molybdenum, present in all soils, is made available in the form required for absorption by plants.

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Please send me copies of this Molybdenum for Plant Growth report.

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A DIVISION OF AMERICAN METAL CLIMAX, INC.

ag leaders audio-visuals

news and views by George F. Johnson



HOW do you plan photographically for an educational tour or trip to a distant state or foreign country?

This is a question I asked myself some months ago since I was planning a 30-day foreign tour.

I searched the available literature on the subject and made note of suggestions coming from friends who had made a somewhat similar trip. Well, here are some of the highlights of my survey on travel photography with a 35 mm color camera.

Of course, the camera is an indispensable tool for any trip, but don't start out with an unfamiliar camera. A new camera, fine! But get possession of it in plenty of time to become familiar with all details of its operation. Shoot several complete rolls of film so experience is gained in rewinding and unloading as well as in loading and exposing film. A study of the results will also reveal whether the exposure meter (if used), the film, and the camera shutter are properly coordinated to give the desired exposure.

Don't stock up with unfamiliar film. Take the film you are accustomed to or gain some experience with it before departure.

If you have not been taking pictures for a few months, get "warmed up" before taking off on such an important photo venture. Find out what your camera and film can do, especially in adverse weather like rain and fog. You may not always have sunshine, and remember some of our most surprising shots may be taken under these "bad" conditions. Above all don't forget to take along the instruction book!

Be sure your camera and accessories are covered by insurance. If going abroad, make certain the camera is declared at the customs office. It is also advisable to have evidence of purchase within the United States if the camera is foreign-made.

Keep amount of equipment to a minimum, especially for foreign travel. I finally settled on one single-lens reflex

camera with f/1.8, 55mm lens, an ever-ready case with neck strap, an exposure meter, a lens hood, and 15 rolls of 36-exposure color film. It was difficult to give up a tripod since I had used one for years, but I knew circumstances just would not permit time-consuming set-ups for pictures.

How can we plan ahead for the type of pictures to be taken? To a certain



Lynch

extent that can be done. For example, fix in mind that both horizontal and vertical pictures will be taken. We are so used to taking pictures with the camera flat-wise with the subject that we seldom think to turn the camera endwise and shoot pictures vertically.

Fix in mind also that the most interesting travelogs have close-up and intermediate as well as the more distant pictures. Get the field crops, livestock, the rural landscapes, and the farmsteads, but also take close-ups of people's faces, flowers in the gardens, experimental plots, building designs, etc.

Another bit of good advice coming from the experienced is this: When in doubt, shoot! You may regret not taking the picture at all far more than getting one which in your final judgment might better have been untaken.

Photograph titles and subtitles for the slide sequence as you go. Road signs, names of cities or other points of geo-

graphic interest, and close-ups of tourists maps—all may help tell the story.

The final appraisal of the slides after the trip is very important. Most of us, according to those with long experience, have an uncontrollable desire to show just about every picture we expose on a trip. To leave out that foggy, out of focus, overexposed shot of "the crumbling ruins of what's that" is unthinkable.

In this connection let's heed the advice coming from the company that makes most of the color film we use: "Don't be afraid to throw out bad slides. Show only your best pictures, don't keep your audience for more than an hour—and you'll soon acquire a reputation as a crackerjack photographer."

WHAT'S NEW

Operation of slide projectors by means of wireless control is the latest step in audio-visual automation. The device has been incorporated in **Bell and Howell's Tele-sonic** wireless remote control slide projector, and in **Aire-quipt's Superba-Sonic**. These projectors are priced in the \$200 to \$275 range. Probably others will also be on the market soon.

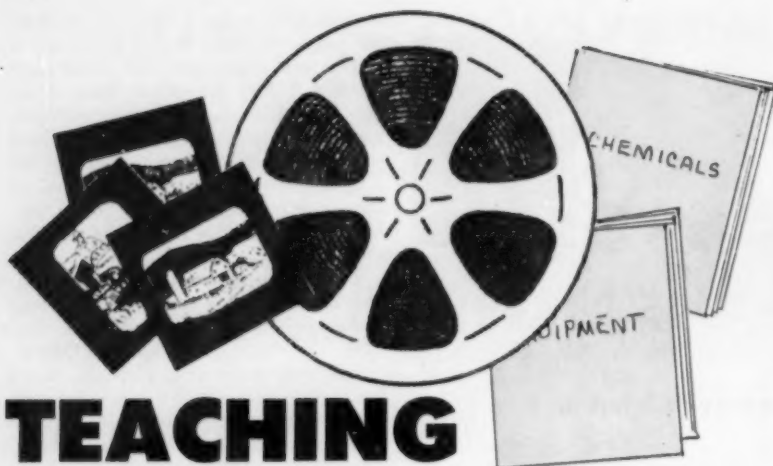
A new **Polaroid film** which develops both a print and a negative in 15 seconds will be available by mid-year. The first out will be for large press cameras. The film will be marketed in sheets for mounting into holders that slip into the back of the camera.

Davega Stores Corporation has announced its **Roll-A-Print** machine which makes prints in less than 10 seconds from negatives up to 3 1/4" x 4 1/4". The small portable machine is listed at \$19.95. The pre-mixed developer comes in plastic bottles at \$1.95 and the paper in a box of 100 sheets for \$2.95.

The Voice of Music Corporation recently announced its **V-M** slide-projector-tape-recorder **synchronizer**. It makes possible the addition of inaudible slide-change cues to tape recorded commentary or music—all handled by remote control. The synchronizer unit alone is priced at \$35.15. When teamed up with the V-M tape recorder, the combined unit can be synchronized with most popular makes of remote-controlled slide projectors by use of a special adapter plug.

THE PROMISE OF TV

Educational TV promises the first fundamental advance in teaching methods since the invention of the printing press 500 years ago. It can raise the level of teaching; it can lower the cost to the taxpayer; it can help the student achieve fuller individual development. — John L. Burns, President of RCA.



TEACHING HELPS

for classroom and field use

CROPS & SOILS

Allis-Chalmers Mfg. Co., Box 512, Milwaukee 1, Wisconsin

16 mm Films

THE HYBRIDS. Color, sound, 15 min. Development of hybrid seed corn.

THE SOYBEAN STORY. Sound & color, 18 min. Story of Soybeans from planting to processing.

GRASS IS GOLD. Sound, color, 12 min. Green grasses and legume mixtures and how they can be ensiled.

TAKING THE PASTURES TO THE COWS. Sound, color, 12 min. Utilization of forage for direct feeding.

RETURN TO EDEN. Sound, color, 13 min. Story of organizing conservation district, and conservation practices.

WITH OUR OWN HANDS. Sound, color, 28 min. Three generation portrayal of a farm as it undergoes watershed development and conservation practices.

Booklets

NEW OPPORTUNITY IN SOIL AND WATER CONSERVATION. 24 pages. 8½" x 11". Small watershed program.

LAND OF PLENTY. 5" x 8". 64 pages. History of Agriculture.

DeKalb Agricultural Association, Inc., DeKalb, Illinois

16 mm Films

ACRES OF SCIENCE. Sound, color, 25 min. Scientific research movie showing how corn breeders manipulate genes to control the Kuling cells in corn plants.

ACRES OF SORGHUM. Sound, color, 14 min. Testing and production of hybrid grain sorghum.

Slide Films

SORGHUM CULTURE. Color. Shows the various farm operations in raising sorghum.

BEHIND THE SEED. Color. Deals with the research, production, inspection, and processing of DeKalb Hybrid Sorghum seed.

THE STORY OF A KERNEL OF DEKALB CORN. Color. Covers the planting, detasseling, harvesting, drying, grading and storage of seed corn.

HUNGER SIGNS OF CORN. Color. Shows deficiency symptoms in corn from lack of proper soil nutrients. Covers amount of nitrogen, phosphorus, potassium, etc., that corn plants need.

CORN COLORS AND COLOR MIXTURES. Color. A study in simple genetics. Describes the

yellow, red or white coloration in the corn kernel and what happens when yellow is crossed with red, etc.

SEXUAL REPRODUCTION IN PLANTS. Color. Tells about the male and female elements of farm crops and how they unite to produce the seed.

THE CORN BORER—GANGSTER OF THE CORN FIELD. An educational film on the origin, habits and control of the European corn borer.

Note: A syllabus is furnished with each slide film.

Booklets

HYBRID SORGHUM. Pictorial booklet covering the cultural practices for producing hybrid grain sorghum.

THE STORY OF DEKALB. Designed to acquaint the reader with the DeKalb Agricultural Ass'n., from the beginning up to the present.

ACRES OF GOLD. Contains variety descriptions of corn with many pages devoted to better cultural practices.

CORN CULTIVATION. Compares deep and shallow cultivation with scraping.

HOW THICK SHOULD I PLANT? Gives results from planting studies. Compares thick planting with thin as affecting yield.

HOW DEEP SHOULD CORN BE PLANTED? Charts and diagrams on depths of planting.

DON'T JUDGE A KERNEL BY ITS LOOKS. Calls attention to the many extras that are in the hybrid corn kernel.

Gering Products, Inc., Kenilworth, New Jersey

Booklets

AGRI-NEWS AND POLYETHYLENE NEWS BULLETINS. Discuss many new uses of Plastic Film.

Maine Dept. of Agriculture, News & Motion Picture Service, State Office Bldg., Augusta, Maine

16 mm Films

POTATOLAND. Color, 9 min. Describes modern potato farming in Maine.

BETTER SEED. Color, 19 min. Story of Maine program in developing and marketing seed potatoes.

Morton Chemical Co., Agricultural Div., 110 No. Wacker Drive, Chicago, Illinois.

16 mm Film

RED SEED. Sound, color, 27 min. Story of seed treatment in Sweden.

Booklets

THE BENEFITS OF A MODERN SEED TREATMENT. 5½" x 8½".

Northrup, King & Co., 1500 Jackson St., N. E., Minneapolis, Minnesota.

16 mm Film

NOCULIZED SEED. Sound, color, 10 min. Research story behind the development of Noculized Alfalfa.

GET MORE FROM EVERY ACRE. Sound, color, 23 min. Threefold story showing good farming practices, explaining how hybrid seed is bred and processed.

Booklets

USEFUL FARM INFORMATION. 32 pages. Discusses legumes, grasses and grains.

NK37 BERMUDA GRASS. 15 pages. Field report.

Visking Division, 6733 West 65th St., Chicago 38, Illinois

16 mm Film

PRODUCTION, PROTECTION AND PROFITS ON THE FARM. Sound, color, 30 min. Explains and illustrates use of polyethylene film for preserving silage and other crops.

DAIRY

Armeo Drainage & Metal Products, Middletown, Ohio.

Booklet

DAIRY HOUSING. 8½" x 11". 16 pages. Application bulletin #65. Illustrated.

Babson Bros. Co., 2843 West 19th St., Chicago 23, Ill.

Booklets

THE TONGANOXIE SYSTEM. 8½" x 11". 4 pages. Illustrated discussion of the latest system of pipe line milking.

PICTURE WINDOW PARLOR. 8½" x 11". 16 pages in color. About one of the best ways to keep our good farm youths right on the farm.

THE WAY COWS WILL BE MILKED ON YOUR FARM TOMORROW. 9" x 11¾". 32 pages. Variety of milking parlor designs and loose housing requirements.

REMINDER TO DAIRYMEN. 3½" x 8¾". Tells about a new movie showing an x-ray of a cow's udder as she secretes milk. 12 pages.

AUTOMATIC FEED HANDLING SYSTEM. 8½" x 11". 4 pages. Push-button feed handling system for milking parlors.

HARVESTING YOUR MILK CROP. 6" x 9½". 17 pages. The story of how milk is made in the cow—by Dr. C. W. Turner, University of Missouri.

Universal Milking Machine Division, National Cooperatives, Inc., First Ave. at College, Albert Lea, Minnesota.

16 mm Films

"GRADE A" ALL THE WAY. Sound, color, 25 min. Cow management, dairy sanitation, and quality milk control.

DAIRYING WITH A FUTURE. Sound, color, 25 min. Describes various pipeline systems.

INSIDE STORY OF MILKING. Sound, color, 30 min. Increasing milk yield and improving udder health.

FARM CHEMICALS

California Chemical Co., Ortho Div., Lucas St. & Ortho Way, Richmond 4, California.

16 mm Films

KEEP AMERICA GROWING . . . QUALITY FRUIT. Sound, color, 30 min. Covers insect and disease control problems on deciduous fruit.

KEEP AMERICA GROWING . . . QUALITY FOOD & FIBRE. Sound, color, 30 min. Covers major vegetable and fibre crops grown.

(Special folder available on flower growing films.)

THE GRANULE STORY—Sound, Color, 10 min. Story of granular insecticides, herbicides, new methods for application.

COUNTY AGENT AND VO-AG TEACHER

TOBACCO TRANSPLANT PROTECTION—Sound, color, 10 min. Importance of protective program for tobacco seedlings.

SOIL TREATER X—Sound, color, 10 min. Treatment of seed and furrow to protect cotton seedlings from soil-borne insects and disease.

JOHNSON GRASS CONTROL—Sound, color, 10 min. New product and various application methods for control of Johnson Grass in cotton.

COTTON FERTILIZER—Sound, color, 10 min. The importance of continuous fertilizer feeding for the production of top yields.

SUGAR BEET NITROGEN MANAGEMENT—Sound, color, 10 min. Importance of good fertilizer practices in producing high beet tonnage consistent with sugar content.

THE LETTUCE STORY—Sound, color, 10 min. The growing of lettuce, from planting to harvest, in the Salinas Valley of California.

TREE & VINE FERTILIZATION—Sound, color, 10 min. A study of the production of grapes, peaches and apricots in California under various fertilizer programs.

ORTHO FLY KILLER D—Sound, color, 10 min. Development of a new fly killer, university research, and outdoor use in critical fly areas.

RANGELAND FERTILIZATION—Sound, color, 10 min. The fertilization of rangeland in San Andreas, California, including the application and economics of rangeland programs.

CUSTOM BLENDS—Sound, color, 10 min. Development of a "prescription" pesticide product for use in Eastern apple areas.

Chemagro Corp. Order from Modern Talking Pictures, 3 East 54th Street, New York, New York

35 mm Film

GUTHION. Sound, color. Describes major insect problems that must be solved for profitable fruit growing. Scenes show living habits of insects and insect damage to fruit.

16 mm Film

CO-RAL. Sound, color. Shows how insects attack, when and how to spray, with close-ups of cattle insects.

Geigy Agricultural Chemicals, Saw Mill River Road, Ardsley, New York

16 mm Film

A WAY WITH WEEDS. Sound, color, 22 min. Shows use of herbicides in corn.

Shell Chemical Company, 50 West 50th St., New York 20, New York

16 mm Film

THE RIVAL WORLD. Sound, color, 25 min. How science meets the challenge of the insect.

Sinclair Refining Company, Farm Sales Dept., 600 Fifth Ave., New York 20, New York

16 mm Film

500,000 TO ONE. Color, sound, 25 min. Insect control.

FARM SHOP

Bostrom-Brady Mfg. Co., 528 Stonewall Street, S. W., Atlanta, Georgia

Booklets

DIRECTION BOOKLET. 3½"x6". 12 pages. Testing, adjusting and operating the farm level.

Lincoln Electric Co., 22801 St. Clair Ave., Cleveland 17, Ohio.

Kit

TEACHING AIDS KIT (AV-82). Charts, booklets, etc., on arc welding.

FARM STRUCTURES

American Zinc Institute, Inc., 324 Ferry Street, Lafayette, Indiana

16 mm Film

ZINC CONTROLS CORROSION. Sound, color,

35 min. Contains an animated explanation of corrosion and how zinc controls it.

Filmstrips

HOW TO MAKE GALVANIZED ROOFS LAST LONGER. Color, 37 frames. Shows economical ways to keep old roofs rust-free and attractive.

SELECTION & APPLICATION OF GALVANIZED ROOFING. B&W. 53 frames. Self-explanatory.

Booklets

SELECTION AND APPLICATION OF GALVANIZED ROOFING AND SIDING, 9 x 4. 20 pages.

METALLIC ZINC PAINT FOR METAL SURFACES, 9 x 4. 24 pages.

Granite City Steel Company, 20th & State Streets, Granite City, Illinois.

16 mm Film

STEELMAKERS TO MIDDLE AMERICA. Sound, color, 27 min. Complete story of making of steel.

Booklets

HOW THE HERMAN BROS. ERECTED A 32' x 50' MACHINE SHED IN 9 DAYS, 8½" x 11". 16 pages. Complete list of building materials and costs, step-by-step construction photos, building tips and four farm building floor plans.

DO-IT-YOURSELF USES OF STRONGBARN STEEL ROOFING. 18 pages.

Republic Steel Corp., Agricultural Relations Bureau, Republic Building, Cleveland 1, Ohio

16 mm Films

LET'S BUILD A FENCE. Sound, B&W, 14 min. How to build good fences.

CURTAINS OF STEEL. Sound, B&W, 13 min. Making wire fence.

(Order films from Modern Talking Pictures, Farm Film Foundation, or Venard Organization.)

Booklets

HOW TO ERECT FARM FENCE. 26 pages, illustrated.

STEEL ROOFING ON FARM BUILDINGS. 32 pages, illustrated. How to select and apply steel roofing.

FEEDS & MEDICATIONS

CIBA Pharmaceutical Products, Summit, New Jersey.

16 mm Film

A REPORT ON THE RUTGERS UNIVERSITY CONFERENCE ON THE USE OF SERPASIL IN POULTRY PRODUCTION. Sound, color, 17 min. Highlights research on the feed additive, Serpasil.

Dr. Salsbury's Laboratories, Charles City, Iowa.

16 mm Film

PROGRESS IN POULTRY. Sound, color, 13 min. Development of disease control in poultry industry.

Booklets

COCCIDIOSIS BOOK, 8½" x 11". 20 pages. Includes an "Atlas of Coccidiosis."

SET OF FIVE LITTLE POULTRY DISEASE LIBRARY BOOKS, 5½" x 4½". Cartoon style.

POULTRY HEALTH MESSENGER. 1961. 24 pages, color. Discusses disease control and good management.

HOC HEALTH MANUAL. 16 pages, color. Discusses pig losses, diseases, parasites, stresses treatments, good management.

TURKEY HEALTH MANUAL. 16 pages, color. Covers management, improved growth and market appearance, stresses, disease control.

Standard Brands, Agricultural Department, 625 Madison Ave., New York 22, New York.

16 mm Films

THE STORY OF FLEISCHMANN'S IRRADIATED DRY YEAST. Sound, B&W, 25 min. Need for vitamin D in livestock with trip through yeast plant.

RICKETS IN CALVES. 15 min. Based on experiments conducted at Pennsylvania State University.

IRRIGATION & WATER SYSTEMS

International Harvester Co. (order from Modern Talking Pictures, 216 E. Superior St., Chicago 11, Illinois).

16 mm Film

TAMING A NEW FRONTIER. Sound, color, 25 min. Damming the Colorado River for irrigation.

R. M. Wade & Co., 1919 N. W. Thurman St., Portland 9, Oregon

16 mm Films

WATER ON WHEELS. Sound, color, 14 min. Shows full cycle on mechanized lateral move-power roll.

WATER MOVES TO PROFIT. Sound, color, 18 min. Shows how to move lateral by tractor.

Filmstrip

WATER IS WEALTH. Sound, color, 30 min. Basics of Sprinkler irrigation.

Slides

WADE'RAIN POWER KOLL SLIDES. B&W & Color. Photos of fittings and systems.

Slide Rule

WADE'RAIN SLIDE RULE. Pocket-size. Irrigation planning aid.

Booklets

Illustrated catalog No. 26 (revised) of fittings, components and equipment.

Illustrated literature on Power-Move, Hand-Move, "Farm-Facts" Planning Form for Sprinkler Irrigation Systems.

LIVESTOCK & POULTRY

American Aberdeen-Angus Breeders' Association, 3201 Frederick Blvd., St. Joseph, Missouri

16 mm Films

ON AMERICA'S ANGUS TRAILS. Sound, color, 22 min. Shows the use of Angus cattle in all sections of country under variable climatic and range conditions.

AN ANGUS IN YOUR FUTURE. Color, sound, 21 minutes. Designed to help youngsters in selection, feeding, fitting, showing of Angus heifers.

MODERN BEEF CATTLE. Sound, color, 17 min. Illustrates the points to look for in the judging and selection of Aberdeen-Angus.

MR. BLACK, BUILDER OF BETTER BEEF. Sound, color, 15 min. Shows what good registered Angus bulls are doing toward the improvement of Nation's commercial beef herds.

Booklet

STAR OF YOUR FUTURE. 32 pages, illustrated. How to select, feed, fit, show calves and manage beef steer and heifer projects.

Chart

BEEF CATTLE CHART. 22" x 30". Show various parts of a steer from which different whole-some cuts of beef are taken.

American Hampshire Sheep Association, Stuart, Iowa. Order film from The Venard Organization, Peoria 2, Illinois

16 mm Film

SHEEP SHAPE. Sound, color, 30 min. Explains how to fit and show sheep.

Judging Charts

YEARLING EWES. Practice chart. 4 animals. Reasons.

Booklets

HISTORY & STANDARD OF HAMPSHIRE TYPE. 20 pages. Illustrated. Includes management practices.

GET TO KNOW THE HAMPSHIRE BREED. Illustrated. Explains Hampshire breed and Association behind it.

HAMPSHIRE MEMO BOOK. Pocket-size. Space for notes, plus printed data for breeders and up-to-date calendars.

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HAMPSHIRE SHEEP IMPROVEMENT PLAN. Indexing plan for ewes.

American Hereford Association, 715 Hereford Drive, Kansas City 5, Missouri

16 mm Films

THE HEREFORD HERITAGE. Sound, color, 30 min. Herefords from early days to present and their representation throughout the nation.

THE HEREFORD STORY. Sound and color, 28 min. Adaptability of Herefords in all types of terrain and climates.

Booklets

SOME POINTS TO CONSIDER WHEN JUDGING HEREFORDS. 8 1/2" x 11", 4 pages. Illustrations and score cards for Hereford steers and breeding cattle.

THE FUTURE CATTLEMEN. 79 pages, color.

California Chemical Co., Ortho Div., Lucas St. & Ortho Way, Richmond, California

16 mm Film

LIVESTOCK PEST CONTROL. Sound, color, 30 min. Covers insect and parasite control on all types of cattle.

De Kalb Agricultural Association, Inc., De Kalb, Illinois.

16 mm Films

THE PROFIT PULLET STORY. Color, 25 min. How today's "egg laying machine" is developed. Story revolves around precision breeding techniques employed by scientists at De Kalb.

ACRES OF CAGES. Sound, color, 20 min. Covers methods of housing, feeding, and management as well as types of birds adapted to cages.

Slide Films

BREEDING FOR BETTER CHICKENS. Color. Details on inbreeding, crossing and testing of De Kalb chicks.

Booklets

THE BALANCED BRED PROFIT PULLET. Illustrates research necessary to make a balanced bred egg laying bird.

THERE IS MONEY IN CAGE OPERATIONS. 12 pages. Covers cage installations.

Granite Grit Institute of America, Inc., Room 2323, 9 Rockefeller Plaza, New York 20, New York

16 mm Film

THE INSIDE STORY OF A CHICKEN GIZZARD GRINDING. Sound, B&W, 5 min. X-ray motion picture showing the chicken gizzard in action.

Booklets

INCREASING FEED EFFICIENCY. A guide to more efficient use of feed.

CHART. Standardized granite grit sizes and feeding recommendations.

U. S. Steel, Film Distribution Center, 525 William Penn Place, Pittsburgh 30, Pennsylvania

16 mm Film

MODERN TRENDS IN SWINE PRODUCTION. Color, 16 min. Life-cycle swine management including breeding, feeding, equipment and housing for production of quality pork. Narrated by Bernard Ebbsing

TRACTORS & EQUIPMENT

Allis-Chalmers, Farm Equipment Div., Milwaukee, Wisconsin

16 mm Films

WITH OUR OWN HANDS. Sound, color, 28 min. Soil and water conservation.

RETURN TO EDEN. Sound, color, 13 min. How a soil conservation district is organized and operated.

Booklets

NEW OPPORTUNITY IN SOIL & WATER CONSERVATION. 24 pages. Illustrated educational

booklet.

LAND OF PLENTY. 64 pages. Revised Edition.

John Bean Division, Box 9490, Lansing 9, Michigan

16 mm Films

EVOLUTION OF ORCHARD SPRAYING. Sound, color, 15 min. Traces the history of John Bean sprayers.

BRUSH FIGHTERS. Sound, color, 20 min. Use of high pressure sprayers in control of brush.

BETTER LIVESTOCK. Sound, color, 30 min. Use of high pressure sprayers in cattle spraying operations.

CONTOUR-MATIC. Sound, b&w, 20 min. Use of "Contour-Matic" spray boom for control of roadside weeds and brush.

SEQUA-MATIC IRRIGATION. Silent, color, 20 min. Shows operation and applications of Shur-Rane's automatic irrigation system.

SCIENCE FIGHTS A FIRE. Sound, color, 25 min. Depicts high pressure fog fire apparatus in actual operation.

JOHN BEAN STORY. Sound, color, 28 min. Traces development of agricultural equipment through initial planning and manufacturing stages and on down to marketing and ultimate delivery to grower. (Limited copies available. Give alternate dates when making reservations).

Danuser Machine Co., 500 E. 3rd St., Fulton, Missouri

16 mm Film

DIG HOLES SITTING DOWN. Sound, color, 20 min. Demonstrates the effectiveness of mechanical hole-digging.

Booklet

GUIDE FOR BETTER FENCING. 3 1/2" x 8 1/2". Fact file on modern methods of farm fence construction.

International Harvester Co., Chicago 1, Illinois. (Films available from Modern Talking Picture Service, 216 E. Superior St., Chicago 11, Illinois)

16 mm Films

ROMANCE OF THE REAPER. Sound, B&W, 27 min. Story of the invention of the reaper.

THE STORY OF TWINE. Sound, color, 26 min. Story of twine in agriculture.

Mayrath, Inc., Dodge City, Kansas

Charts

BELT AND PULLEY CHARTS FOR AUGERS AND ELEVATORS. 8 1/2" x 11".

HORSEPOWER CHARTS FOR CONVEYORS. 8 1/2" x 11".

GALLONS PER ACRE CHARTS FOR CROP SPRAYERS. 8 1/2" x 11".

New Holland Machine Co., New Holland, Pennsylvania

16 mm Films

WHISTLING STEAMERS. Sound, color, 10 min. History of threshing.

MIRACLE OF MECHANIZATION. Sound, color, 20 min. History and development of grassland farming equipment.

PITCHFORKS TO PUSHBUTTONS. Sound, color, 10 min. Farmstead mechanization from silage feeding to barn cleaning.

Sinclair Refining Co., Farm Sales Dept., 600 Fifth Ave., New York 20, New York.

16 mm Films

THE PENCIL AND THE PLOW. Sound, color, 27 min. Evaluating trends and outlook for marketing products.

THINGS KEEP CHANGIN'. B&W, sound, 40 min. Necessity of farm and home development program.

THE BEST MAN. Color, sound, 27 min. Emphasizes latest farm machines and farming methods.

Booklet

SINCLAIR FARM AND HOME BOOK. 34 (Continued on page 32)

COUNTY AGENT AND VO-AG TEACHER



"My New Building was Easy... And It'll Grow With My Needs....."

... David Saucy, Jr., Oregon berry producer points out

Dave Saucy saw results in a hurry when his county agent recommended West Coast Lumber's panelized farm building construction...and Saucy's new utility building will always fit his needs...simply by adding new panels.

Extension agents recognize West Coast Lumber's panelized buildings as a quick...easy...economical solution to farmers' building needs. New buildings may be erected in hours...panels may be added to existing panelized structures as needs grow...and panels may be built on the farmstead with farm labor.

Panels are built on a 4-foot module with West Coast Lumber. Trusses for building widths are 24', 30', 36' and 40'. Buildings of any length are possible, and may be left open as in this example, or closed.

Your nearest retail lumber dealer is the source for information on West Coast Lumber's panelized farm buildings. Ask him for the 16-page instruction booklet: "How to Fabricate and Erect Panelized Farm Buildings"... or write:



Extension agent Palmer Torvand, left, recommended a West Coast Lumber panelized utility building to berry grower David Saucy, Jr. Saucy bought the panels from his lumber dealer and erected the building, with his neighbors' aid, within a day.

FREE... Write us today for complete material list, panelization and truss assembly instructions and erection procedure.



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1410 S. W. Morrison, Portland 5, Oregon



SUMMER

PROGRAMS

PROJECTS

and IDEAS

for county agents and vo-ag teachers

THERE goes that dusty, green Plymouth down the road again."

The driver? Vo-Ag Instructor Leonard J. DeBoer, vo-ag teacher at Chamberlain, South Dakota. Reason? He's out making farm visits to some of his ag boys.

To explain these farm visits let's take a close look at the overall vocational agriculture program. DeBoer is hired to put in eleven months of time on the job instead of the usual nine months.

Many people say, "Well, what do you do the other two months?" DeBoer tells them that time is spent in farm and project visits, a part in preparation for the coming year, and attending summer conferences, visiting new or potential students, and gathering supplies, such as weed plants and seeds.

Let's go back and take a closer look at those farm and project visits and their purpose. The boy's project is the basic link between school and practical work. Here he gets a chance to apply things learned in the classroom. He can make actual comparisons of the yields of different varieties of hybrid strains under similar or identical conditions. DeBoer's purpose in visiting the boy is to get to know him and the set-up of the farm. In this way, he has a better understanding of each boy, his projects and problems.

Project or student visits are made

with a definite purpose. A question may be asked regarding efficient feeding or fly control for livestock, or use of weed sprays and fertilizers for crops. Some questions can be answered on the spot, while others require some research.

The time element varies with each trip. One of the first visits made in this area lasted nearly an entire day. From these visits the ag instructor gets not only an insight of the farm but also knowledge of farming for this area. Valuable information is obtained by learning how the farmer was successful in raising certain crops.

CHECKING ON PROJECTS

What else does DeBoer do besides visit boys? He attempts to see the projects and also see that the project book is kept up to date on each project. Then he can help the boy if he is having trouble with any phase of record keeping which is becoming such an important part of modern farming.

Another part of the summer's work is to gather a new supply of weed seeds and plants. As the weed plants are gathered they are pressed in boxes on a layer of cotton. This draws out the moisture and leaves the plants natural in appearance. During the course of the year they are used in the study of the 39 common South Dakota weeds that the boys learn to identify. Addi-

tional time is spent obtaining or preparing extra training aids.

The town of Chamberlain is a river town and boys attend school from both sides of the river. This greatly increases mileage. DeBoer's area extends over 35 miles to the south and west, and north west to an area of over twenty-five miles. On one side of the river students come in from north of Fort Thompson which amounts to over thirty some odd miles. Others come in from the east and south a similar distance.

"As a result of writing articles and other news items in the school paper and the local paper, I was asked to be the guest speaker at the local Community Club," DeBoer told COUNTY AGENT & VO-AG TEACHER. Here he had a chance to meet a cross-section of the townspeople and active businessmen. At this meeting he gave them a run-down of his background and activities.

"Briefly, I gave them a list of subjects taught and projects made in shop and other items of similar interest. After the meeting we had an informal discussion, and a chance for them to ask questions concerning the ag work and FFA degrees in the local chapter," he said.

Time and effort spent in publicizing this work is of major importance, DeBoer feels, since the public must be acquainted with the program in order to understand its value.

COUNTY AGENT AND VO-AG TEACHER

Effective Teaching Aid

By JIM HAMILTON and HARRY KETCHUM

ONE of the primary responsibilities of the vocational agriculture teacher is to use his position as an instructor and a leader to improve the agricultural welfare of his community. This is a continuous challenge and any new ideas for helping to accomplish it more effectively are appreciated.

The authors feel that the DeKalb Corn Achievement Program is an effective teaching procedure. This cooperative program set-up requires that each student keep accurate records on planting rates, corn growth, diseases, pests and all the economics of corn production and harvesting.

This cooperative effort by a commercial company adds much interest and an additional purpose for a carefully carried out corn production project. County fairs and stock shows add incentive and prestige to the livestock project. This corn achievement plan allows for similar recognition for those with corn projects.

The opportunity of awards and recognition does four things for the student:

1) It creates more interest so that more students grow corn each year with complete records.

2) The competitive nature of the program helps improve record keeping and analysis of the finished project. The increased interest causes them to attempt more of the new practices discussed in vo-ag class to obtain greater profits and efficiency from the corn.

3) Because of the increased interest better teaching results; when more of the boys have corn projects, it creates more opportunities for on-farm instruction where practical demonstrations, open discussion and teaching can take place.

4) The corn achievement program's best point and value is that the winners are not necessarily the students with the highest yields. The points are earned for completeness and accuracy of records and an analysis of efficiency of the corn growing project. The knowledge achieved comes when students ask "How is it your costs were 58 cents per bushel of corn produced when my costs were 69 cents per bushel?" "Why were your profits per acre \$6.20 more than my profits?"

The comparison of facts when the project is completed is the difference between this and some other corn growing enterprises. The emphasis is on efficient corn production, accurate records, and observations, and not on higher yields alone.

This program was started in 1954 with the assistance of a group of vo-ag instructors. Mr. Don Coil, now a state supervisor of agricultural education in Illinois, was one of those helping to set up the first program. There are about 1000 vo-ag instructors using this plan with about 10,000 students in eleven states taking part.

Hamilton and Ketchum are vo-ag instructors at Audubon, Iowa, and Greenville, N. Y., respectively.

Ideas for 4-H Projects

By WAYNE T. MESSERLY

WANT to try some different 4-H projects this summer? Here are two community service

ideas which were applied for the first time recently in Webster County, Iowa, by Extension Director Paul Harms and Assistant Director Earl Henderson.

The ideas are new to Iowa, according to the state 4-H office at Iowa State College which gave the go-ahead on them, and are probably new elsewhere. If you haven't tried them yet, here's a good opportunity to introduce them to your county.

The first idea helps solve one of the county director's knottiest problems, the compiling of accurate weekly crop and weather reports during the growing season.

"This problem develops because of the pressures of time and distance," Harms said. "Try as you will, it's almost impossible to get in every township during the week. Sometimes you get tied up in the office and only get out

Records were kept on these forms to help the student analyze his projects.

SUMMER PROGRAMS

(Continued)

to a few farms. How can you file an accurate crop and weather report under these conditions?

"We solved this problem by having each of the 18 boys' 4-H clubs select a crop and weather reporter. We mail him a crop and weather report with a return, stamped, envelope enclosed, on Tuesday. He fills out the form and returns it to our office by Saturday so we can check and compile the information for release," Harms said.

"The questionnaires contain routine questions such as: Are the majority of pastures being used yet? Amount of oats seeding completed; spring plowing completed and silage harvesting completed? We make answering them simple by having the club reporter circle or cross out the closest answer. However, instead of using percentages which might be confusing, we give him choices in fractions like $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$."

"Each club reporter also reports on the amount of rainfall through the week by taking readings from a properly located rain gauge. We also ask him for simple evaluations of hail, wind and rain damage. Finally, he summarizes how many days farmers could work in the fields and adds any comments about

extreme weather conditions.

"We realize this system isn't perfect, but these reports plus our own findings give us what we believe is a reasonably accurate and reliable picture of on-the-farm crop and weather conditions. Just as important is the fact that when additional information is needed on short notice for radio and press use, we know where to telephone for it," Harms said.

SURVEY OF FARM LABOR

The second idea is aimed at helping solve the perennial problem of farm labor shortages.

In cooperation with Richard Gilliland, farm placement representative of the Iowa Employment service agency at Fort Dodge, the Webster County 4-H boys' clubs surveyed the farm labor outlook in each township.

"The survey, which is kept in confidence, accomplishes two things: 1) It supplies us with a check list of the non-farm labor used during the past year. 2) It gives us a list of the number of available farm workers, especially teenagers who want full-time or part-time seasonal work during the school vacation," Farm Labor Representative Gilliland said.

Employment Manager Ken White states his approval of the project in these words. "It took our former farm

labor representative four years to build up a file of 600 farmer contacts, many of which were outdated in the process. With the help of the 4-H boys, Gilliland contacted 1,400 farmers in 30 days!"

The first survey was made during April of 1959 which should be current for two to three years. The spring months are ideal to initiate this program because farmers aren't tied down with field work and it's early enough to place any prospective workers contacted in the survey.

Unlike the crop and weather project, which is up to a volunteer or an individual selected by the club, the labor surveys are a group project. Each club figures out the best way of dividing chores and contacting every farmer in the county.

In Webster County, only the boys' clubs conducted the labor surveys and provided the weather reporters.

"Besides contributing a community service, both of these projects give club members valuable experience in public contact work and keeping of records," Harms said. ☆

TEACHING HELPS

(Continued from page 28)

pages, illustrated, ideas and suggestions for better farm living.

U. S. Steel, Film Distribution Center, 525 William Penn Place, Pittsburgh 30, Pennsylvania

16 mm Film

FENCE BUILDING THE MODERN WAY. Sound, color, 9 min. Operation of the Fury Fence fence-building machine.

ACCORDING TO WEBSTER. Sound, color, 10 min. The idea that fence is one of the modern farmer's production tools surprised even Noah Webster who defined the word "tool" more than 100 years ago. Shows how investment in fence can bring greater profits to any farmer who puts it to modern use.

DAN TABER'S LEDGER. Color, 27 min. Instructional film produced to aid farmers in planning and erecting farm fences.

MISCELLANEOUS

Maine Dept. of Agriculture, News & Motion Picture Service, State Office Bldg., Augusta, Maine

16 mm Films

PART-TIME FARMER. Color, sound, 17 min. Documentary on the people who operate 30 per cent of our farms.

MARKET MAN. Color, sound, 13 min. Story of the development of a new career in the food trades, the market service man.

Sinclair Refining Co., Farm Sales Dept., 600 Fifth Ave., New York 20, New York.

16 mm Films

THE INCREDIBLE JOURNEY. Sound, 27½ min. Case histories that underline the seriousness of the safety theme.

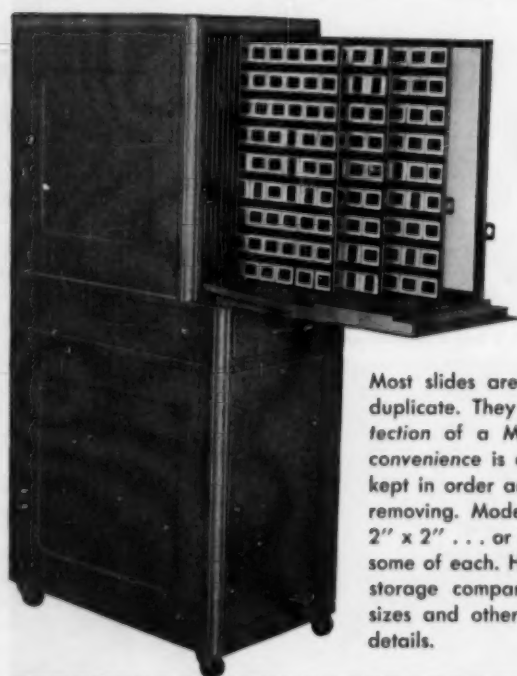
MIRACLE IN PARADISE VALLEY. B&W, sound, 45 min. Safety for farm and home.

Spraying Systems Co., 3201 Randolph Street, Bellwood, Illinois

Booklets

CATALOG No. 30. 8½" x 11". 20 pages. Describes spray nozzles and accessories for farm, ranch, orchard and garden spraying.

COUNTY AGENT AND VO-AG TEACHER



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vo-ag news

PUBLICITY FOR VO-AG

Facts YOU Should Know about Agricultural Education in the Public Schools is the title of a new pamphlet published by the American Vocational Association.

Original draft of the publication was prepared by H. M. Hamlin, professor of agricultural education at the University of Illinois and chairman of the AVA public information committee.

Concluding statement in the pamphlet:

"We may be sure that this form of public education will continue and we may anticipate developments in it during the next 50 years which will overshadow those of the past 50 years, the period in which public school education in agriculture was being brought into the American educational scene."

Copies are available from AVA, 1010 Vermont Ave., N.W., Washington 5, D. C. One to ten cost 10 cents each; ten or more copies are 6 cents each.

AN AG TEACHER'S PRAYER

DEAR LORD: Help me to become the kind of ag teacher that my supervisors would like to have me be.

Help me: To teach and train the disinterested and the dumbwitted without ever losing my patience or my temper. Give me that love for my fellow men which passeth all understanding so that I may lead the mentally retarded, obstinate, unfit student into the paths of righteousness by our example and my soft persuading remonstrance, instead of complaining to my superiors, the counselors, or fellow teachers.

Instill: Into my inner being tranquility and peace of mind, that no longer will I wake from my restless sleep in the middle of the night crying, "What has the supervisor got that I haven't got, and if so, how do I get it?" Teach me to smile if it kills me.

Make me: A better leader of men by helping me to develop larger and greater qualities of understanding, tolerance, sympathy, wisdom, mind-reading, and second sight.

And when: Dear Lord, Thou hast helped me to achieve the high pinnacles

my supervisors have prescribed for me, when I have become this paragon of all the supervisory virtues in this earthly world,

Dear Lord, Move over. AMEN.

—James Peddicord, Gardnerville. Reprinted from the Nevada Vo-Ag Teachers' Newsletter, Vol. II, number 6.

WATERMELON GROWERS LEARN ABOUT MARKETING

An adult vocational agricultural class in marketing was organized at Trenton, Florida last fall for watermelon growers by Herbert Brown, vo-ag teacher at Trenton High School. Allen Poole, a major in agricultural education and agricultural economics at the University of Florida, was employed by the Gilchrist County Board of Public Instruction to teach the class. It met each week for 18 weeks, closing in February, 1961.

One of the first adult classes of its type organized and successfully completed in the state, the class's purpose was to give the growers more knowledge of present-day marketing, consumer demands, operation involved in marketing, economic principles underlying a good marketing system, marketing facts available to farmers and how marketing affects the whole farm operation and family living.

During the two-hour regular meetings a number of resource people were invited to assist Poole in teaching the class—including Dr. H. B. Clark and K. M. Gilbraith, Agricultural Economics Department, University of Florida; Dr. E. W. Cake, marketing specialist, agricultural extension service, University of Florida; and Leonard Cobb, Gilchrist County agent.

After the regular meetings closed, the growers met and organized a coop, called the Trenton Area Melon Growers, Inc. It has 31 charter members and about 2,000 acres of melons assigned to it.

Charles Lindsey was elected president, and D. D. Faircloth, G. C. Roberts, Edsel Mikell, Mervin Hines, Lee Roberts and J. C. Hutchinson are members of the board of directors. B. G. Sparkman has been employed as sales manager.



Watermelon growers enrolled in the marketing class at Trenton High School, Trenton, Fla.

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For Poultry

Oyster Shell Products Company
Mobile, Alabama

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county agents, usa

By VIC CAROTHERS

New York Association of County Agricultural Agents at their recent annual meeting held in Ithaca named the following officers and directors for 1961: Front row: Gilbert Smith, Yates County, secretary; William Pendergast, Orange, president; William Howe, Cattaraugus, vice-president; and Merle Reese, Clinton, past-president. Back row: Russell Hadnett, Jefferson; Russell Parker, Livingston; William Worth, Chenango; Edgar Buckley, Columbia; Trenholm Jordan, Chautauque; Earle Wilde, Sullivan.



AN ENVIABLE RECORD

Don Schink, president of the National Association of County 4-H Club Agents for 1961, has an enviable and active record of service. A farm boy from De Pere, Wis., he got interested in the cooperative extension service through his 10 years as a 4-H member.

Schink has been a Wisconsin club agent for 11 years, the last 8 years in Jefferson County. During this period the 4-H membership has grown from 600 to 1100 and adult leadership from 60 to over 300.

Pride of the Jefferson County program has been the dairy project. Six Holstein animals owned by 4-H members in the county have earned the All-American title. Twelve Guernseys have been chosen to be shown at their National Show.

Schink is a past president of the Wisconsin Club Agents Association, former chairman of the Wisconsin 4-H advisory committee and is now a director of the Wisconsin Extension Workers Association.

NEW OFFICERS

Nebraska County Agent Association directors for 1961 are: President—Harold Stevens, Lexington; vice president—Dale Langford, Thedford; secretary-treasurer—Norman Tooker, Omaha; Roy Stohler, Madison; Joe Roe, Tekamah; Ronald Stohler, Chadron; Robert Wilson, Auburn; Melvin Lantis, Imperial, and John Fox, Red Cloud, Nebraska.

Newly elected officers for the **Washington** County Agents Association are President—Morrill Delano, Tacoma; vice president—Gale Gurtle, Spokane; secretary-treasurer—Dino Sivo, Port Orchard. Directors—Mel Hougan, Yakima; Wilbur Gerlitz, Prosser; Bob McKay and Carl Gilmore of Olympia. The association is making plans for a

busy year, including a Summer Family Meeting in July.

Herbert Kinney, Hurley, Iron County agricultural agent, was elected president and William Rogan, Waukesha, Waukesha County agent, secretary of the **Wisconsin** County Agent's Senior Group, whose membership consists of those in service ten or more years. The group meets twice yearly, at the annual Extension conference and at Farm and Home Week in January.

"IF I WERE A COUNTY AGENT AGAIN . . ."

Maybe he got fired, or maybe he got promoted to the ranks of the administrators and got philosophical. Anyway, some anonymous somebody who had once been a county agent leaves with us these words of wisdom:

"If I were a county agent again . . .

I would have a new appreciation for the privilege of working with farm people.

I would search out the real leaders for each agricultural commodity of economic importance.

I would try hard to provide the opportunity for these leaders to help build programs.

I would work at the leadership job myself, knowing that lay leadership is responsive to confidence in professional workers.

I would use all facilities of my landgrant college or university to support the people's program.

I would put new life in the demonstration method of teaching.

I would help agriculture to improve its public relations.

I would do more hunting and fishing."

—Reprinted from *Tennessee Extension Review*, February 1961

AN EFFECTIVE AID TO COMMUNICATION

For more than ten years extension agents in Nebraska have been sharpening their communication skills through competition with their co-workers.

Nebraska's Annual Information Contest for Extension Agents has been incentive for individual improvement as well as encouraging more effective use of available mass media within the counties. Entries in press, radio, circular letter, photography and visual aids gimmick divisions are evaluated by competent judges and criticized on an individual basis. During Annual Extension Conference they are on display.

George Round, head of the Information Department at the University of Nebraska, and the originator of the contest idea, says: "We have seen marked improvement in county agents' use of mass media outlets in their areas since the early years of the contest. They are more aware of the importance of keeping the public informed through use of mass media. The prize money for the contest is earmarked for visual aids equipment, so some offices have been able to improve their facilities with money they've won."

Ideas county agents can use

DUST CATCHER



County Agent J. Doyle Jones observes the "dust catcher" in the soil testing lab.

Dust caused by preparing soil samples for testing need not be a problem in your soil laboratory. The arrangement shown was devised by J. Doyle Jones, Texas county agent at Houston, Missouri, and has been used successfully in Texas County for several months.

The simple arrangement consists of an old vacuum cleaner connected to an air tight plywood box in which the soil samples are prepared. The box is 18" x 18" x 20" with a front opening 12" x 20". The glass area is 10" x 18".

Samples are pulverized and screened inside the box with the vacuum cleaner operating. All air movement is up and back; therefore, no dust is allowed to escape.

Cost of the arrangement shown was less than \$10.00.

COUNTY AGENT AND VO-AG TEACHER

booklet-bulletin reviews

Publications listed on this page may be obtained free of charge by sending a post card request to the company or manufacturer named. Be sure to say you saw it in County Agent & Vo-Ag Teacher.

Audio-Visual Aids

PROTECT YOUR SLIDES

If you would like to protect your slides, keep them in order and be able to examine them conveniently, you'll be interested in a Multiplex slide cabinet. A catalog describing various models on roller bases with storage compartments is available from Multiplex Display Fixture Co., 931-941 N. 10th St., St. Louis 1, Mo. Ask for Slide Cabinet Bulletin LS-158.

SOUND PROJECTOR

When showing motion pictures in any type of room, Kodak Pageant 16mm sound projector helps every student hear the full range of sound—from the highest tones on the sound track to the low tones carefully reproduced by the baffled speaker. Eastman Kodak Company, Dept. 8-V, Rochester 4, N. Y., will be happy to send you their descriptive literature on the projector, if you will write for Bulletin V3-22.

TEACHING AND LEARNING

A free brochure of award winning teachers' essays entitled *How Audio Visual Aids Make Teaching and Learning Easier* is being offered by Viewlex, Inc., manufacturers of projectors, previewers and sight and sound units. If you're interested in the teaching potential of audio-visual instruction, you'll want a copy of this brochure. It's available from Viewlex, Inc., 18 Broadway, Holbrook, L. I., N. Y.

INSTRUCTIONAL AID

An informative booklet on using the Beseler VuGraph overhead projector to facilitate teaching is available from the manufacturer. For your copy of *The Use of the VuGraph as an Instructional Aid*, write to Charles Beseler Company, 233 S. 18th St., East Orange, N. J.

CHESTFULL OF IDEAS

How to use films effectively in audio-visual education is the subject of a helpful booklet entitled *Treasure Chest of Audio-Visual Ideas*. The booklet includes instructions in the skillful use of films and sources of film and A-V information. If you would like a copy, write to Victor Animatograph Corporation, Division of Kalart Company, Inc., Plainville, Conn.

Chemicals

INSECT CONTROL CHART

Velsicol Chemical Corporation, basic producer of chlordane insecticide, is offering an educational three-color wall chart illustrating and describing more than 100 insects. Under each insect is listed the damage it causes and the method of control. The chart may be obtained by writing Velsicol Chemical Corporation, 330 E. Grand Ave., Chicago 11, Ill.

WEED KILLER

Four new brochures have been published by

Stauffer Chemical Company which pinpoint usage of the selective herbicide, Eptam, in the Northeast, South, Midwest and West. When you request a copy you will automatically receive the one for your area. If you would like to receive *Eptam Stops Grasses Before They Start*, write to Stauffer Chemical Company, 380 Madison Ave., New York 17, N. Y.

Communications

FARM INTERPHONE

The interphone system provides telephones at important work locations in farm outbuildings which are tied in to the main station in the house. You can take or make calls from any of them. If you'd like to learn more about this convenient form of communication designed exclusively for farm use, write to American Telephone and Telegraph Company, Farm Interphone Division, Room 516A, Dept. D, 195 Broadway, New York 7, N. Y.

POCKETPHONE

Globe Electronics is offering literature on a Pocketphone two-way radio that is no wider than a pack of cigarettes and less than twice as tall. Plug-in earphones are available if surrounding noise is a factor. If you would like information on this new product, write to Globe Electronics, Council Bluffs, Iowa.

Crops and Soils

GARDEN GUIDE

If you would like to have up-to-date information on backyard vegetable gardening, you'll be interested in *Asgrow Garden Guide*, a little booklet of helpful suggestions. Just send a card to Asgrow, P. O. Box 406G, New Haven 2, Conn.

Livestock & Poultry

BULK MILK COOLERS

A new booklet on bulk milk coolers and accessories is now available from Sunset Equipment Company. The booklet gives the dimensions and specifications needed to plan a cooler purchase and lists the 1961 line of Sunset milk coolers. If you'd like a copy, write Sunset Equipment Company, P. O. Box 3536, St. Paul 1, Minn.

PIG CASTRATING TABLE

Farmers can now sit in comfort with operating and medication equipment within easy reach to do a better, faster job of castrating and vaccinating baby pigs. A new castrating and medication table is on the market which holds the pig securely and prevents it from squealing. For literature, write to Walsh Manufacturing Company, Charles City, Iowa.

Get acquainted with the New Products

on page 36

- Thirst Quencher
- Silage Saver
- Hay Conditioner
- Granular Applying Kit

FEED FLAVORING

A scientific discussion of flavoring in livestock and poultry feeds has been compiled in a 16-page catalog entitled *Flavorstat*. If you would like to learn how to make feeds more palatable so that a higher level of livestock production can be obtained, you'll want a copy of this catalog. Write to Flavor Corporation of America, 3037 N. Clark St., Chicago 14, Ill., for your free copy of *Flavorstat*.

Tractors & Equipment

GROUND MAINTENANCE

Ford has published an attractive, illustrated booklet showing a sampling of their equipment and tractors used for ground maintenance. The company will be happy to send it to you along with information on specific tractors and equipment most pertinent to the job that needs to be done. For a copy, write Ford Motor Company, Tractor and Implement Division, 2500 E. Maple Rd., Birmingham, Mich.

EQUIPMENT COVERS

Stop Wasting Your Money on Coverings That Don't Last! This is the title of a new two-color brochure which shows some of the many uses that Herculite vinyl/nylon can be put to by farmers. Herculite covers and tarpaulins can be used as silo covers, load covers, temporary storage, ditch liners, etc. If you'd like a copy of the brochure, write to Herculite Protective Fabrics Corp., 661 Fourth St., Newark 7, N. J.

COMBINES FOR EVERY USE

Allis-Chalmers is offering a new catalog illustrating and describing their line of Gleaner-Baldwin combines. Included is the inside story of Gleaner combine benefits . . . from reel to straw spreader. If you would like to receive the catalog, write Allis-Chalmers Manufacturing Company, Box 512, Milwaukee 1, Wis.

Miscellaneous

FREE ENGRAVING

When you purchase award trophies or plaques from Trophy Sales, Inc., you receive free engraving and save money. The company is offering a big, free catalog of their merchandise. For your copy, write Trophy Sales, Inc., Dept. CA-3, 75 W. Van Buren St., Chicago 5, Ill.



NEW AQUATHOL FOR FAST, SAFE CONTROL OF UNDERWATER WEEDS

In just a few days Aquathol can clear ponds and lakes of troublesome underwater weeds . . . without harm to fish or other water life . . . and leave water safe for domestic and recreation uses. Developed exclusively by Pennsalt, Aquathol is easy to apply—effective.

Ask your farm chemical distributor or write Pennsalt Chemicals Corp., Aurora, Illinois; Montgomery, Alabama; Bryan, Texas, or 3239 Mayfair Boulevard, Fresno, California.

a product of Pennsalt research . . .

AQUATHOL

*A trade-mark of Pennsalt Chemicals Corp.

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HANDLING GALVANIZED ROOFING & SIDING

Easy to handle. Easy to apply and nail. What's more, strong galvanized steel sheets stay put and hold at the nail holes. For extra long service, specify heavily zinc-coated sheets such as this... "Seal of Quality"...

FREE INSTRUCTION MANUALS!

write to Field Office
AMERICAN ZINC
INSTITUTE

324 Ferry Street
Lafayette, Ind., Dept. CA-6



new ideas and products

SILAGE SAVER

There's another new use for polyethylene! Dairy farmers have found that Durethene polyethylene is a very effective covering for trench or bunker-type silos. Use of the polyethylene film resulted after various other methods



were tried including sawdust and thick layers of lime, none of which were satisfactory since they proved to be too expensive and time-consuming.

The Durethene polyethylene film provides an almost airtight cover at little cost, and spoilage of the silage can be held to a minimum—under 5% in most cases. If you are interested in obtaining more information about this new use for polyethylene, write Paul Cornyn, Plastics Division, Koppers Company, Inc., Pittsburgh 19, Pa.

THIRST QUENCHER

A six-place automatic livestock water fountain with non-rusting stainless steel drinking troughs and fibreglass lids has



been introduced by Fairfield Engineering & Manufacturing Company. The new Stock-O-Matic HI-6 Model 1500, in addition to six drinking places for cattle, may be had with a second stainless steel trough with two additional drinking places for hogs.

This helpful unit can be cleaned easily and simply by pulling a flushing rod. If you would like more information about the fountain, write Fairfield Engineering at Fairfield, Iowa.

A REAL KILLER

An unusually accurate granular applying kit which attaches directly to the planter has been developed by Century Engineering Corporation. It is available with single or double compartments. The single hopper model is used for applying either weed killers or insecticides, and the double hopper unit will apply both weed killers and insect killers at the same time.

The single hopper holds 32 pounds of granulars. The double hopper holds 32 pounds of weed killer and 16 pounds of



insect killer. The flow rate from each hopper adjusts separately. The application rate can be varied from 8 ounces to 60 pounds per acre.

C. D. Davenport of Century Engineering can answer all your questions about this interesting new applicator. His address is 401 Third St., S.E., Cedar Rapids, Iowa.

NEW HAY CONDITIONER

Three-position wheel mounts are a new standard feature of the Cure-All hay conditioner just introduced to the market. When positioned on the rear mounts, the wheels travel clear of even the tallest, rankest crop for clean pick-up and wrap-free conditioning.

Front positions are suitable for light



or medium crop conditions. The well-balanced design provides easy one man hook-up. For more information about this interesting unit, write Joe Ecker, Gehl Bros. Mfg. Co., 615 South Water St., West Bend, Wis.

COUNTY AGENT AND VO-AG TEACHER

QUESTION of the month

Q. TO THE EDITOR: "Since I saw you last, I have spent more than a year with UNESCO and almost half of that time I spent traveling in various parts of the globe. I am back at my desk now with occasional need to write to folks like you who keep a finger on pulses that I can't reach.

"I was much interested in the Washington page of the April Issue. I need to know more about the general topic covered on the page. Harms and Peter have said that ag teachers and their organization need to get on the ball and that widespread interest needs to be shown in some late and pertinent developments in Washington . . . I would appreciate your clarifying this for me and giving some indication of the action that would be both feasible and desirable and at the same time respond to the urgency that Harms and Peter have in mind. You would do me a great favor if you would give me some thoughts on this."—GORDON I. SWANSON, *Dept. of Agricultural Education, University of Minnesota.*

A. It was real nice hearing from you again, Gordon. I would expect this kind of interest from you. Frankly, we've been somewhat mystified by the lack of interest shown around the country by President Kennedy's proposed new program for vocational education.

The answer to your query will be found in this month's "Ag Leaders' Washington." We asked Harms and Peter to answer your question and devote their popular page to covering up-to-the-minute developments. Please turn to page 10.

★ ★ ★ ★ ★

Sounding Board

We have been greatly pleased with the amount of interest shown by our readers in our series of articles on Chain Stores (December 1960, February and March 1961). Because of lack of space we have not been able to continue this series. However, we intend to resume the discussions very soon. Much of the space will be devoted to a "rebuttal" by the chain stores. Watch for this. In the meantime, we'll appreciate your comments.—EDITOR.

★ ★ ★ ★ ★

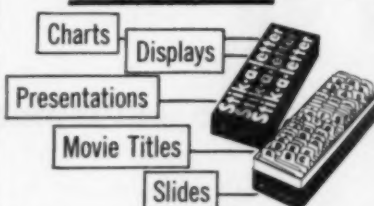
N-P-K ANALYSES TO BE USED IN SOCIETY JOURNALS

The elemental method of expressing fertilizer nutrients, including minor elements, will be used in the research and educational journals of the Soil Science Society of America and American Society of Agronomy, beginning with the January 1962 issues.

Authors will be permitted to include the oxide expressions along with the elemental analyses.

JUNE, 1961

The professional lettering technique

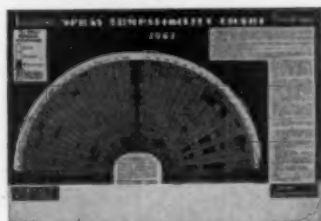


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Stik-a-letter Co.

Rt. 2, Box 1400, Escondido, Calif.

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Order both charts
— a \$1.00 value — for only 75c
Quantity prices on request.

This offer good only in U. S. A. and Canada. Coin or money order must accompany each order.

COUNTY AGENT & VO-AG TEACHER
Willoughby, Ohio



Sheepmen in your area are choosing Hampshires. They are planning to start a purebred stock, grade flock or to improve the quality of the existing flock. It will benefit you to investigate why . . .

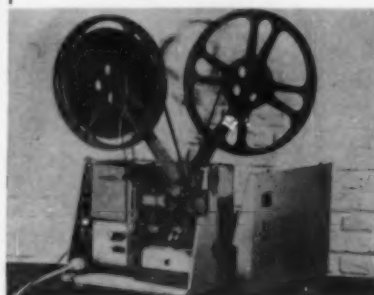
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The American Hampshire Sheep Assn.
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in summing up

Who will replace Dr. Spanton?

IT HAD TO COME some time. Dr. W. T. Spanton will retire as chief of the Agricultural Education Branch of the U. S. Office of Education on or about November 1.

When you think of Dr. Spanton you think of the FFA—and a policy of no compromise. You never had to wonder where Dr. Spanton stood. He was for the teaching of farming—period. I have profound respect for “Bill” although I have never ceased to attack his position that “a good farming program is adequate background for a boy going into related agricultural occupations.” Vocational agriculture has had first class leadership in Dr. Spanton—especially with the FFA, which he literally built.

But the time has come for a new leader. What kind of man should he be? Well, first he should have already demonstrated that he has power over people's minds. And he inspires them to action!

What kind of action? Well, readers of this page know where I've stood on this matter—ever since my editorial in July 1953. And my March in *summing up* brings my thoughts further up to date on what kind of a program Vo-Ag ought to have.

For some time, however, we've been emphasizing what progressive leaders in vocational agriculture are calling for.

Thus, this page will devote the majority of its space to a very important resolution by outstanding vo-ag leaders:

SPECIAL RESOLUTION OF THE DIRECTOR OF AGRICULTURAL EDUCATION BRANCH U. S. OFFICE OF EDUCATION

WHEREAS, vocational education in agriculture since its establishment in 1917 in the public schools in this country; has served rural people through educational programs designed to help them meet problems they have faced and are facing in entering or progressing in the field of agriculture; and

WHEREAS, rapid changes in education, technology and the agricultural economy are giving increasing emphasis to the continuing need for assisting people in meeting these problems; and

WHEREAS, a continuing dynamic and intensified program of vocational education in agriculture must be maintained and strengthened to meet the challenges of and cope with the crucial issues precipitated by a complex and rapidly changing agriculture; and

WHEREAS, vision, competency and educational leadership are necessary for reaching the challenging new horizons in the program of vocational education in agriculture; and

WHEREAS, Dr. W. T. Spanton, Chief Agricultural Education Branch, U. S. Office of Education, while at this conference announced his retirement effective on or about November 1, 1961;

Therefore, be it resolved that the Southern Regional Conference of Supervisors and Teacher Train-

ers in Agricultural Education in conference assembled in Mobile, Alabama on April 14, 1961, urge that serious deliberation be given to the selection of a person highly qualified in training and experience who can provide the dynamic leadership necessary for meeting the challenges ahead in vocational education in agriculture. Such qualifications would include the ability to work effectively with leaders in other fields of education as well as leadership in Agricultural Education. He would seek to use and develop leadership in all areas of the profession. He would encourage and assist state leaders in Agricultural Education to provide the necessary leadership in assisting local people to develop programs of vocational education in agriculture to meet changing needs for education in agriculture. Finally he would be a man who would challenge the response and gain the support of the personnel in Agricultural Education.

Be it further resolved that copies of this resolution be sent immediately to

Dr. W. T. Spanton, Director
Agricultural Education Branch
U. S. Office of Education

Mr. James H. Pearson
Assistant Commissioner for Vocational Education
U. S. Office of Education

Dr. S. M. McMurrin
Commissioner of Education
U. S. Office of Education

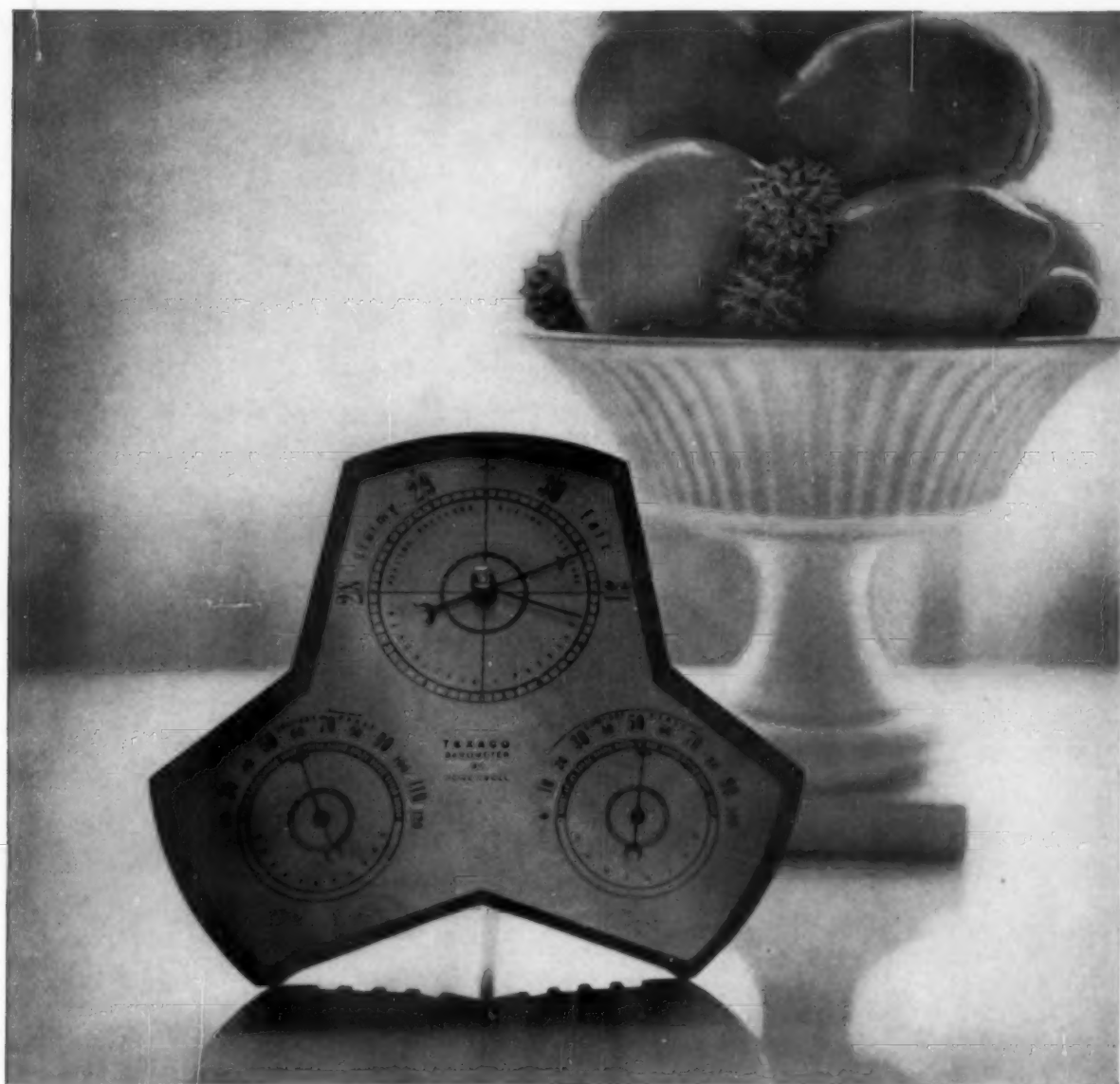
Mr. A. A. Ribicoff, Secretary
Health, Education and Welfare

What the resolution means is simply this: many vo-ag leaders are concerned about the future expansion of vocational agriculture under a leader who recognizes the changing needs of our times.

President Kennedy's projected program to expand the horizons of vocational agriculture has captured the imagination of vo-ag leaders across the nation. Our “Speak Up,” “Question of the Month” and “Ag Leaders' Washington” features are all devoted to this subject this month.

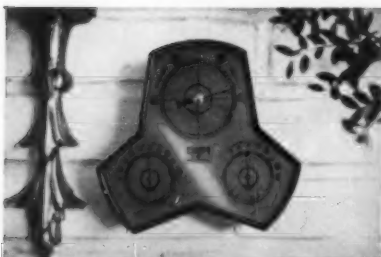
Big things are in store for Vo-Ag in the '60's. Be sure to read the latest developments (at press-time) in Ag Leaders' Washington this month. Important thing in this: each vo-ag teacher has a voice in the future of his profession. Study this Kennedy program—then let your state association know how you feel about it. This must be a grass roots effort to show that you care!


Editor



EXCLUSIVE TEXACO DEALER OFFER:

Precision barometer, thermometer, hygrometer—by Honeywell, only \$3.50 WITH FREE COUPON.



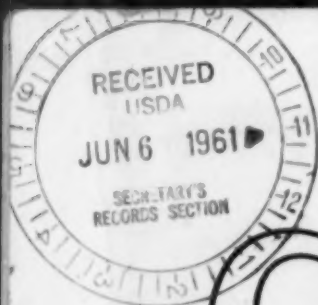
Barometer: top dial gives barometric pressure — which indicates the current weather trends. Thermometer, at lower left, gives the accurate room temperature. Hygrometer, at lower right, gives indoor humidity. Precision-made and guaranteed by Honeywell — exclusively for Texaco.



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WHAT'S SO SUPER

ABOUT THE SUPER 92?

Many, many things . . . like handling, for instance. The easy-going way this biggest Massey-Ferguson combine works rough fields and heavy stands. Never top-heavy or cumbersome . . . always sure-footed and smooth. Setting a fast, relentless grain-getting pace. Equally at home in all grains, in corn, soybeans, sorghum and rice. The Super 92 rates a "super" for its proven record of low maintenance too. A real bargain on upkeep, it has a well-earned reputation for durability on those rugged

border-to-border harvesting runs. But the most "super" thing of all is the combine's big, grain-saving capacity—measured in terms of minimum field loss! The way it separates all it gulps in, and tanks all the grain it meets! No wonder more custom operators—men who know combines best—put the Super 92 in a class by itself! For handling, maintenance, capacity—all three! It's the most super-profitable investment you can make—the big Massey-Ferguson Super 92!



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